TIME

INVENTION ISSUE

The Edible Campfire
Mind-Reading Computers
The Invisibility Cloak
The Hummingbird Drone

A Twitter-Based Hedge Fund The Artificial Leaf The 10,000-Year Clock

... and 43 more of the year's best innovations

What Steve Jobs couldn't teach us about inventing

Ry Ley Grossman



THE INDISCREET CHARM OF CHELSEA HANDLER

HOW TO SAVE THE OSCARS

www.time.com





Get your cash back:

GET 5% CASH BACK AT RESTAURANTS, MOVIE THEATERS AND DEPARTMENT STORES

on up to \$1,500 in eligible purchases this October through December 2011 when you use Chase Freedom. Plus, get 1% cash back on all your other Chase Freedom purchases. Activate your 5% cash back today, and on new categories every 3 months.

Visit chase.com/freedom or your local branch to activate.





5% cash back looks good on you.









1909. Chivas Regal 25
was launched into
booming New York. It was an
overnight success. The world's first
luxury whisky quickly became the
toast of high society. But the party was
short lived. In 1920, US Prohibition
brought the story of Chivas Regal 25 to an end
It wasn't until almost a century after its
original launch Colin Scott, master blender at
Chivas Brothers, set about bringing the legend
back to life. Sourcing only the rarest
25 year-old whiskies, blended meticulously
to rekindle the delicate intensities and subtle
textures made famous by the original Chivas
Regal. 2007. Chivas Regal 25 was back
Once again a discerning symbol of luxury

EDITOR-IN-CHIEF John Hues **EDITORIAL DIRECTOR Martha Nelson**

TIME

MANAGING EDITOR Richard Stengel

DEPUTY MANAGING EDITOR Nancy Gibbs EXECUTIVE EDITOR Radhika Jones EDITOR, TIME INTERNATIONAL Jim Frederick DESIGN DIRECTOR DW Pine DIRECTOR OF PHOTOGRAPHY Kira Pollack ASSISTANT MANAGING EDITORS Michael Duffy. Rana Foroohar, Ratu Kamlani, Bill Saporito REGIONAL EDITOR Zoher Abdoolcarim (Asia) EDITORS-AT-LARGE Mark Halperin, loe Klein, SENIOR EDITORS Aparisim "Bobby" Ghosh, Jeffrey Kluger, CONTRIBUTING EDITORS-AT-LARGE Barton Gellman. CORY CHIEF loce Fideling

SENIOR WRITERS John Cloud, Richard Corliss, Stephen Gandel. STAFF WRITERS Gilbert Cruz, Sean Gregory, Alice Park,

SENIOR CORRESPONDENT Michael Grunwald CORRESPONDENTS Washington Michael Crowley, Mark Calabres, Steven Gray, Jay Newton-Small, Michael Scherer Mlaml Tim Padgett Belling Hannah Beech, Austin Ramzy Belrut Aryn Baker, Andrew Lee Butters Hong Kong Michael Schuman Jerusalem Karl Vick (Bureau Chief); Aaron J. Klein Johannesburg Alex Perry London Catherin Mayer New Delhi Jyoti Thottam Paris Bruce Crumley Administration Sheila Charney (Office Manager); Melissa WRITER-REPORTERS Andréa Ford, Frances Romero Claire Suddath, Ishaan Tharoor, Kayla Webley
REPORTERS Andrea Dorfman (Deputy Chief of Reporters);
Barbara Maddux (Department Head); Harriet Barovick, Susan ART Christine Dunleavy (Deputy Art Director); Thomas M. Miller (Tablet Projects Art Director); Victor Williams (Senior Art Directors); Andrée Kahlmorgan (Associate Art Directors); Skye Gurney (Art/Photo Coordinator)

Graphics Lon Tweeten (Artist); Heather Jones graphics Designer) PHOTOGRAPHY Paul Moakley (Deputy Photo Editor); Marie Tobias (Associate Picture Editors) Contributing

Photographers Marco Grob, Peter Hapak, Yuri Kozyrev, COPY DESK Danial Adkison (Deputy); Megan Rutherford (Copy Coordinator); Elissa Englund, Courtney Harris, Robert

RESEARCH CENTER Angela K. Thornton (Director); ASSISTANT TO THE MANAGING EDITOR Tosca LaBoy

TIME.com Catherine Sharick (Executive Director); Daniel Bautz (Production Manager); Susanna Schrobsdorff (Assistant Managing Editor); Jim Fields (Deputy Multimedia Director); Tony Karon, Ruth Davis Konigsberg (Senior Editors); Sora (Associate Editors); Simon Fung (Designer); Nicholas Hegel McClelland (Deputy Picture Editor); Yumi Goto (Associate (Director of Product Development); Shanta Speller (Associate Manager); Srivaths Lakshmi (Technical Lead); Henry Chan, Micah Ernst (Senior Web Developers): Will Cole, Judy Megan Friedman, Megan Gibson, Meredith Melnick, Josh

CONTRIBUTORS Robert Baer, Kate Betts, Dan Cray, Sanjay

Thornburgh, David Van Biema, Vivienne Walt, Adam Zagorin.

TIME FOR KIDS Nelida Gonzalez Cutler (Managing Editor); Iasevoli, Suzanne Zimbler (Senior Editors); Kellie Plasket (Writer-Reporter); Don Heiny (Photo Editor); Jill Tatara (Associate Photo Editor); Gary Kelliher (Production Manager) Time Learning Ventures Jonathan Rosenbloom (Editor) TIMEFORKIDS.com Vickie An (Writer-Producer)

MAKEUP Sarah Bentley (Chief); Mary Michael, Lynn Ross, Gretchen Weber International Elizabeth Mata (Manager);

PRODUCTION Paul Zelinski (Director); Kathleen Seery (Senior Manager); Carrie A. Mallie, Rohini Persaud (Managers); Micko Calugay, Juanita Weems EDITORIAL PRODUCTION Richard K. Prue (Director); Rudi Papiri, Robert Pizaro, Barry Pribula, Monica Reales, Clara Renauro, Katy Saunders, Samantha Schwendeman, Hai Tan, TECHNOLOGY SUPPORT Lamarr Tsufura (Associate Director);

PUBLISHING SOLUTIONS Scott Smith (Senior Director); John Arbucci (Senior Manager); Sue Falls, Joanne Recca, Richter, Luke Vanderberg, Jonathan Vasata, Ed Wong MAGAZINE & DIGITAL ENGINEERING Craig Coffey, Lou Tsai (Directors); Craig Cardillo, Ashim Man Pradhan, Tony Shin (Managers); Carlos Amédée, Tom Chamnongvongse, Harold

THE NEWS GROUP THE NEWS GROUP
WORLDWIDE PUBLISHER Ximberly Anderson Kelleher
GROUP DIGITAL PRESIDENT John Cantarella
SENIOR VICE PRESIDENT, CONSUMER MARKETIMO NAIE SIM
VICE PRESIDENT, OPERATIONS BROOKE TWYFORD
SENIOR VICE PRESIDENT, FINANCE Elisas Fishman VICE PRESIDENT, FINANCE EIISSAFISHMAN
VICE PRESIDENT, FINANCE YANDAMA PATEL
VICE PRESIDENT, MARKETING Steve Cambron
VICE PRESIDENT, COMMUNICATIONS All Zelenko
VICE PRESIDENT, CONSUMER MARKETING LYdia Morris ASSOCIATE PUBLISHER, SALES Michael Safran EXECUTIVE DIRECTOR, CUSTOM PUBLISHING Newell Thompson

Boston Thomas Petersen (Manager) New York Craig Johnson (Manager), Peter Britton, Chad Carr, Nina Fletcher, Samantha Gimbel, Elisabeth Hatab Schaefer, Maggie Kemsley-Shafer, Barbara Oram-Peters, Jody Reiss, Katte Simony Washington Ray Farmer (Manager) Chicago Tim Schlax (Manager); James Medd, Alexis Schwartz, Leah Viands Detroit Pam Carlsen. Joseph Giacalone Los Angeles Meredith Long (Manager): Alisa Beeli, Nancy B. Cooper, Farhad Fozounmayeh San Francisco Janet Haire, Peter H. Matthews TIME.com Craig Ettinger (General Manager); Justin Oborne (National Sales Director); Ryan Afshar, Laura Heck (Directors); MARKETING Carrie Dolen, Damian Slattery Erica Davis, Jeanne Lewis, Ilyse C. Linder, Clarice Lorenzo, Wendy Metzger, Alex Rivera, Meda Rosca, Paton Roth, Melissa Mandel Rudzik (Managers); Vivian Li, Megan Marcel, C. Tasha Sterling

ADVERTISING SALES Atlanta John Helmer (Manager)

CUSTOM PUBLISHING Lori Ioannou (Executive Editor); Murnhy Weniun Zhao

CONSUMER RESEARCH & INSIGHTS Andy Borinstein (Executive Director); Joel Kaji (Director); Steve Montgomery

CONSUMER MARKETING Adam Kushnick (Finance Director); Rachel Freed (Senior Finance Manager); Jennifer Levin (Marketing Director); Nellie Albright, Eosin Masson, Anjali Satyu (Managers); Amit Dodeja (Assistant Manager); Nancy D'Auria, Daniel Deutsch, Jessica Gelfman,

FINANCE Andrew Weissman (Group Director); Brian Clavell (Group Editorial Director): Parnivan Gutierrez (Associate Julia Luu, Sarah Marino (Managers); Marcela Cojocaru,

PUBLIC RELATIONS Daniel Kile (Executive Director); Kerri Chyka (Director); Jennifer Nedeau (Associate Director); Vidhya Murugesan (Manager); Daniel Leonard (Associate Manager); Shama Hussain (Junior Publicist);

TIME FOR KIDS Paula Backer (Consumer Marketing Director); Cliff Sabbag (Manager); Amanda Johnson

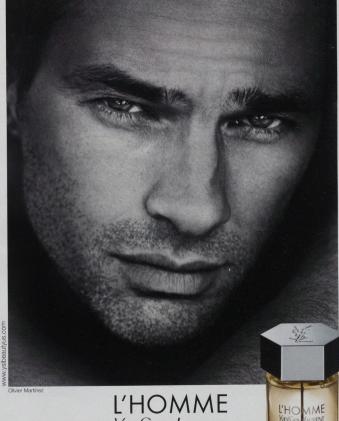
(ASSOCIATE MAININGE)
ADMINISTRATION Headquarters Francesca DiMaggio
Atlanta Jennifer Hester Boston Claire Arnstein Chicago
Monica Wood Detroit Kelly Konarski Los Angeles
Ani Barsamian, Monica Marie Mallen New York Martha Civitillo, Jane Cole, Gabrielle Geronimos, Melissa Jiménez, Iulie Wooters San Francisco Kelly Robinson Washington Ceylan Conger

LEGAL Steven Weissman (Deputy General Counsel)
HUMAN RESOURCES Ellen Shultz (Executive Director)
Time Warner Retail Sales & Marketing Jeremy Biloon (Vice President); Jean Kennedy (Brand Manager); Jared Levy (Assistant Brand Manager)

TIME INC

EXECUTES FOR PRESIDENTS lowered M. Servill, July 1. Come, Mach Ford, Stephanic Gorge, Seve Sachs, Reyly Wobers
THE IDE. CR. BARDED SOUTHORS Leed in Face freedom, Cross Bodge, Crossive Vice President, David Peril Vice President RESEARCH & INSIGHTS Betsy Frank (Chief Research & Insights Officer); Caryn Klein (Vice President, Business Research & Insights)

INFORMATION TECHNOLOGY Mitchell A. Klaif (CIO and Senior Vice President); Agatha M. Cutrone, Abe Cytryn, Robert Duran, Timothy Mummers, Ben Ramadan, Annabelle Soper, Iimmie Tomei (Vice Presidents)



L'HOMME WesSaint/aurent

SHEER MAGNETISM

AVAILABLE AT MACY'S AND YSLBEAUTYUS.COM

TIME

10 Inbox

BRIEFING 15 Verbatim

16 | LightBox Syrians show support for Bashar Assad

18 | World Technocrats in Italy, Nazis in Germany and police in Brazil

20 | Nation Romney's secret weapons; Occupy Wall Street sweeps

21 | Economy Good news: people are quitting their jobs

22 Milestones Evelyn Lauder and cartoonist Bil Keane

24 | Viewpoint
Jon Meacham
on legislating

responsibility

26 | Curious Capitalist
Rana Foroohar on
the euro zone's best

hope: Angela Merkel

29 | Worldview
Fareed Zakaria on
why China needs a
new China policy

ON THE COVER: Photograph by Jamie Chung for TIME



Friends Jasmine, 6, and Amy, 8, outside a migrant-worker motel in downtown Fresno, Calif. Photograph by Joakim Eskildsen for TIME

FEATURES

30 Newtonian Physics

As other candidates stumble, Gingrich's poll numbers are rising. Could he really be the anti-Romney? by Michael Crowley

34 The Five Myths of Financial Hardship Much of what we think about poverty is wrong, including that it's not fixable by Barbara Kiviat

42 Someone's in There

New research suggests some patients in a vegetative state are actually conscious his Ehen Harrell

48 Are You There, Fame? It's Her, Chelsea How Chelsea Handler turned vulgarity into prosperity by Karl Taro Greenfeld THE CULTURE

Jay-Z profits off Occupy Wall Street; a sword is stolen from Lincoln's tomb

88 Movie Preview

Imm, Hugo and the other stars of the holiday movie season. Plus Ireland's new stimulus package, Michael Fassbender; testing Jonah Hill's babysitting skills

102 The Awesome Column

Joel Stein solves the crisis at the Oscars

104 | 10 Questions Psychologist turned economist Daniel Kahneman

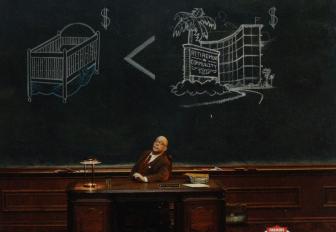




The (ISSA 000-7101 is published unit), except for two issues contrieved by severely. You have have been proposed or the Test A. US building Residential Cortex New You, NY 1000-1003 ISS. Predicates proteing and it is the You, NY 1000-1003 ISS. Predicates proteing and it is desired. A region of the Cortex Corte

Today's Lesson:

LIFE INSURANCE FINANCIAL SERVICES



FARMERS

This is the University of Farmers. A place where our agents are trained to help you enjoy the rewards of parenthood as you prepare for the joys of a fully loaded golf cart. For more information, visit farmers.com.

"Securities effered by accests requisitered with Farmers Financial Solutions, U.C., 20001 Appears Road, Building S. Agours Hills, California 91001. Member FRINDA & SIPC. Life insurance insued by Farmers New World Life Insurance Company, Mercer Island, Washington

Inourance under unitten by Farmers Inourance Exchange and other affiliated companies. Visic farmers com for a list of companies. Coverage not available in all states. © 2011 Farmers Group, inc.



VOL. 178, NO. 21 | 2011

page 56

page 62



page 58



page 61

page 75

page 69

page 65

page 70



page 66



page 80

page 76

page 82

BEST INVENTIONS OF THE YEAR

55 The most ingenious and useful breakthroughs, alterations and transformations of 2011



To apply, visit thankyoucard.citi.com



MAIL

The Costs of War

Re "The Other 1%" [Nov. 21]: I see two ways to have Americans re-engage with their military: blood and money. Blood is the most effective option, but as Mark Thompson points out, the public has no stomach for a renewed draft. Why not then legislate a war surtax for any sustained overseas combat operation, crafted to fully fund that venture and the societal reintegration of the combat troops? Such a law would force a detached populace to focus on the necessity of wars and their socioeconomic consequences. Michael A. Cuoio, Colonel (ret.), U.S. Air Force,

SEOUIM, WASH.

My husband, my sister, my father and I are all veterans, yet I have never encouraged my two children to enlist. As long as this country participates in wars of choice rather than ones where our freedom is really at stake, I never will. Kathleen Wiedman-Butler, WICHITA, KANS.

Viral Justice

It's offensive that John Cloud suggests Hillary Adams' alleged blackmail decreases the atrocity of the sadistic beating her father inflicted on her f"When Secrets Go Viral," Nov. 21]. Stockholm syndrome may account for the girl's surprising continued connection to him, but there is no reason to dwell on her psychology. Whatever her motive, this man deserves to have his life destroyed. Cunthia Parker, COLUMBIA, MO.

The Penn State Scandal

Re "Penn State Has No Defense" [Nov. 21]: Students' demonstrating against the firing of Joe Paterno is like altar boys' marching for the return of pedophile priests. A winning team does not absolve those who rape little boys. Such trade-offs are as bad as the crimes.

Mary Alice Altorfer, NEW BRAUNFELS, TEXAS

As a 1970 Penn State graduate and a retired State Department administrator, I am deeply grieved and totally disgusted that this great university's leadership sacrificed integrity and moral values on the unholy altar of athletic fame and fortune. Ralph Kreamer, LANCASTER, PA.

THE OTHER 1%



in July 2008 after 1 almost as if he had almost as if he had a second of the second of the angle of the second of the second of the second of the angle of the second of the second of the second of the angle of the second of the second of the second of the second of the angle of the second of the second of the second of the angle of the second of the second of the second of the second of the angle of the second of the angle of the second of th	geant Alex Lernors he last of his three landed in a foreign the foreign of the state of the landed in a foreign the state of the state of the landed in a foreign the state of the state of the landed in a foreign the state of the state of the landed in a foreign the state of the state of the state of the landed in a foreign the state of the state of the state of the landed in a foreign the state of the state of the state of the landed in a foreign the state of the state of the state of the landed in a foreign the state of the state of the state of the landed in a foreign the state of the state of the state of the landed in a foreign the state of the state of the landed in a foreign the state of the state of the landed in a foreign the state of the state of the state of the landed in the state of the state of the state of the state of the landed in the state of the state of the state of the state of the landed in the state of the state of the state of the state of the landed in the state of the state of the state of the state of the landed in the state of the state of the state of the state of the landed in the state of	ombat tours, it was
Party Marriage In Marria Security Married		

THE CONVERSATION

'Yes, there is a divide between the warriors and the protected,

Army veteran Jonn Lilvea wrote on the military blog This Ain't Hell in response to Mark Thompson's cover story "The Other 1%." on the disconnect between civilians and the military. The retired platoon sergeant praised our story but criticized TIME and other media outlets for contributing to the rift by focusing disproportionately on "anomalies" like the scandal at Abu Ghraib. On the politics beat, reporters and bloggers zeroed in on comments Anita Hill made at TIME's Person of the Year panel about the sexual-harassment claims against Herman Cain. "The conversation has evolved." Hill said, speaking generally about how such allegations are handled now compared with 1991, the year of the Clarence Thomas hearings. "There's some deliberate inquiry, and that's what I think should continue to happen." When a reporter asked Cain if he had heard what Hill had said, he guipped, "Is she going to endorse me?"



On TIME.com We're flattered. Really. People like to make fake TIME covers—some so convincing that we get angry letters about them, others clearly doctored. like the one protesters have been waving around in Italy A spoof of our Europea edition's Nov. 21 cover about Silvio Berlusconi. it replaces the TIME logo with the verdict FAIL, stamped on the former Prime Minister's forehead. For our pick of the top 10 fake TIME

covers, go to time.com/ fake covers

LONG LIVE NEW BEGINNINGS



LONG LIVE IMAGINATION
What will you imagine with the EOS 60D and EF lenses? Long Live Imagination.





Canon **i**mageANYWARE



Production model may vary.

Get Ready.

The TIME® 2011 Person of the Year poll is now open.

TIME.com/POY



tovota.com/camry

Person of the Year, We asked



Paul Kagame President of Rwanda





Chris Colfer Actor and singer. star of the television series Glee

In the unsympathetic world of an inner-city public high school in Clovis, Calif., Mikendra McCoy supplies her students with much more than just an education. With compassion, she teaches life lessons. "You got to tell the world who you are before it tells you" is one of the many quotes I remember from her class, along with "As long as you own who you are, no one can ever use you against you."





History will show that Steve Jobs, like Edison and others, forever changed the human experience. His work defines how we interact with one another and the world. In our "get it out as fast as you can" world, Jobs was the absolute perfectionist. He made our lives simpler and more enjoyable and was a constant reminder that one driven person can change the world.



Jonathan Franzen Award-winnina

The two most significant changes in American society in my lifetime are the rise and triumph of consumer electronics and the nation's return to gilded-age levels of income inequality. The two phenomena are not unrelated. What is there left for the 99% to dream of but hitting the technoconsumerist jackpot and becoming the next Zuckerberg?



Prototype at born with optional equipment, Production model may vary. Usobe-activation for all Entires* was pass available as principal to the control of the production and minimal manewases of road and rolling conditions. Seekel Entires* approaches to a large amount of clada and you are responsible for all otate charges. Apps are series of the conditions and minimal many and carriers to the all speak and state services are available initially. Apps identified by "Th" or "8" are tardemants or repatitive of inflammants of their respective companies and cannot be used without permission. See to topic convenients or repatitive of their respective companies and cannot be used without permission. See topic convenients of their respective companies and cannot be used without permission. See topic convenients of their respective companies and cannot be used without permission. See topic convenients and cannot be used without permission. See the topic convenients are decirated as a control of the used without permission.

toyota.com/camry



BRIEF SUMMARY FOR PATIENTS BROVANA® [Bro va -nah] (arformoterol tartrate) inhalation Solution Twice-Daily

Brovana 15

BROVANA is only for use with a nebulizer. Read the Medication Guide that comes with BROVANA before you start using it and each time you get a refill. There may be new information. This Brief Summary does not take the place of talking to your healthcare provider about your medical condition or treatment

What is the most important information I should know about BROVANA?

BROVANA can cause serious side effects. including

- · People with asthma, who take long-acting beta, adrenergic agonist (LABA) medicines, such as BROVANA, have an increased risk of death from asthma problems.
- · It is not known if LABA medicines, such as BROVANA, increase the risk of death in people with chronic obstructive pulmonary disease (COPD).
- Get emergency medical care if: · breathing problems worsen quickly you use your rescue inhaler medicine, but it does not relieve your breathing problems

What is BROVANA?

BROVANA is used long term, 2 times each day (morning and evening), in controlling symptoms of chronic obstructive pulmonary disease (COPD) in adults with COPD. BROVANA is only for use with a nebulizer.

LABA medicines such as BROVANA help the muscles around the airways in your lungs stay relaxed to prevent symptoms, such as wheezing, cough, chest tightness, and shortness of breath.

BROVANA should not be used in children It is not known if BROVANA is safe and effective in children. It is not known if BROVANA is safe and effective in people with asthma.

Who should not use BROVANA?

Do not use BROVANA if you: have had a serious allergic reaction to arformoterol.

formoterol, or any of the ingredients in BROVANA. Ask your healthcare provider if you are not sure. See the Medication Guide for a complete list of ingredients in BROVANA.

· have asthma without using a long-term asthma control medicine.

What should I tell my healthcare provider before using BROVANA? Tell your healthcare provider about all of your

health conditions, including if you: · have heart problems

- · have high blood pressure
- · have seizures
- · have thyroid problems · have diabetes
- · have liver problems
- are pregnant or planning to become pregnant.
 It is not known if BROVANA can harm your
 - unborn baby.
- · are breastfeeding. It is not known if BROVANA passes into your milk and if it can harm your baby.

Tell your healthcare provider about all the medicines you take including prescription and non-prescription medicines, vitamins and herbal supplements. BROVANA and certain other medicines may interact with each other. This may cause serious side effects. Know the medicines you take. Keep a list of them to show your healthcare provider and pharmacist each time you get a new medicine.

How should I use BROVANA?

Read the step-by-step instructions for using BROVANA at the end of the Medication

· Use BROVANA exactly as prescribed. One ready-touse vial of BROVANA is one dose. The usual dose of BROVANA is 1 ready-to-use vial, twice a day (morning and evening) breathed in through your nebulizer machine. The 2 doses should be about 12

Do not use more than 2 ready-to-use vials of BROVANA a day.

Do not swallow or inject BROVANA

- · BROVANA is for use with a standard jet nebulizer machine connected to an air compressor. Read the complete instructions for use at the end of the Medication Guide before starting BROVANA.
- · Do not mix other medicines with BROVANA in your nebulizer machine If you miss a dose of BROVANA. Just skip that dose.
- Take your next dose at your usual time. Do not take 2 doses at one time.
- · While you are using BROVANA 2 times each day: · do not use other medicines that contain a long
 - acting beta,-agonist (LABA) for any reason. do not use your short-acting beta, -agonist medicine on a regular basis (four times a day).
- BROVANA does not relieve sudden symptoms of COPD. Always have a rescue inhaler medicine with you to treat sudden symptoms. If you do not have a rescue inhaler medicine, call your healthcare provider to have one prescribed for you.
- Do not stop using BROVANA or other medicines to control or treat your COPD unless told to do so by your healthcare provider because your symptoms might get worse. Your healthcare provider will change your medicines as needed.

· Do not use BROVANA:

· more often than prescribed more medicine than prescribed to you
 with other LABA medicines

Call your healthcare provider or get emergency medical care right away if:

- your breathing problems worsen with BROVANA · you need to use your rescue inhaler medicine more often than usual
- · your rescue inhaler medicine does not work as well for you at relieving symptoms

What are the possible side effects with BROVANA?

BROVANA can cause serious side effects, including:

- See "What is the most important
- information I should know about BROVANA?" · Sudden shortness of breath immediately after use
- of BROVANA · If your COPD symptoms worsen over time do not
- increase your dose of BROVANA, instead call your
- healthcare provider. · Increased blood pressure
- · Fast or irregular heartbeat

 serious allergic reactions including rash, hives, swelling of the face, mouth, and tongue, and breathing problems.

Call your healthcare provider or get emergency medical care if you get any symptoms of a serious allergic reaction

Common side effects of BROVANA include: · chest or back pain

- · diarrhea
- · sinus congestion
- · headache · tremor
- nervousness
- · leg cramps high blood potassium
- · shortness of breath · rash
- · fever · increased white blood cells
- · vomiting
- tiredness · leg swelling
- · chest congestion or bronchitis

Tell your healthcare provider if you get any side effect that bothers you or that does not go away. These are not all the side effects with BROVANA. Ask your healthcare provider or pharmacist for more information. Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088

How should I store BROVANA?

- · Store BROVANA in a refrigerator between 36° to 46°F (2° to 8°C) in the protective foil pouch. Protect from light and excessive heat. Do not
- open a sealed pouch until you are ready to use a dose of BROVANA. After opening the pouch, unused ready-to-use vials should be returned to, and stored in, the pouch. An opened ready-to-use vial should be used right away. BROVANA may be used directly from the refrigerator
- BROVANA may also be stored at room temperature between 68°F to 77°F (20°C to 25°C) for up to 6 weeks (42 days). If stored at room temperature, discard BROVANA if it is not used after 6 weeks or if past the expiration date, whichever is sooner. Space is provided on the packaging to record room
- temperature storage times. · Do not use BROVANA after the expiration date provided on the foil pouch and ready-to-use vial. · BROVANA should be colorless. Discard BROVANA if
- it is not colorless · Keep BROVANA and all medicines out of the reach of children.

General Information about BROVANA

Medicines are sometimes prescribed for purposes not mentioned in a Medication Guide. Do not use BROVANA for a condition for which it was not prescribed. Do not give BROVANA to other people, even if they have the same condition. It may harm them. This Brief Summary summarizes the most important information about BROVANA. If you would like more information, talk with your healthcare provider. You can ask your healthcare provider or pharmacist for information about BROVANA that was written for healthcare professionals

- · For customer service, call 1-888-394-7377. To report side effects, call 1-877-737-7226
- · For medical information, call 1-800-739-0565.

Sunovion Pharmaceuticals Inc. Marlborough, MA 01752 USA BROVANA is a registered trademark of Sunovion Pharmaceuticals Inc.

Manufactured for:

For more information, visit www.BROVANA.com

'If I were in his shoes, I would step down.'

 KING ABDULLAH of Jordan, who became the first Arab leader to openly call for Syrian President Bashar al-Assad to resign; hundreds of antigovernment protesters have been killed in Syria since January

'I have horsed around with kids. I have showered after workouts. I have hugged them, and I have touched their legs without intent of sexual contact.'

2. JERRY SANDUSKY, former Penn State assistant football coach, in his first interview since being arrested and charged with 40 criminal counts relating to sexual abuse of minors

'Europe is in perhaps the toughest hour since World War II.'

3. ANGELA MERKEL, German Chancellor, as new leaders in Italy and Greece rushed to form governments and limit the damage from the euro-zone debt crisis

'There are no magic beans that you can toss in the ground and suddenly a bunch of money grows on trees.'

4. PRESIDENT OBAMA, emphasizing the importance of the Nov. 23 deadline for a congressional supercommittee to reach an agreement on how to lower the deficit by \$1.2 trillion

'The movement is online.'

5. JEFF CHARROIN, Occupy Wall Street demonstrator, after New York City Mayor Michael Bloomberg ordered Zuccotti Park cleared by police; a judge later ruled that protesters could return but without tents and sleeping bags





Number of career wins by Duke University men

Number of career wins by Duke University men's basketball coach Mike Krzyzewski, making him the winningest men's coach in Division 1 history

6.5

Number of units of Call of Duty: Modern Warfare 3 sold in the U.S. and the U.K. in 24 hours—a record for any video game

\$1.50

fee that Starbucks had been charging customers for coffee-bean purchases under 1 lb. (450 g)—without disclosing the surcharge



\$900,000

Amount of a government fine levied against American Eagle, an American Airlines regional affiliate, for tarmac delays of more than three hours on 15 flights in May





World





Iranians attend a funeral of Revolutionary Guards killed in the blasts

An Assassination or an Accident?

1 | IRAN A series of mysterious bomb blasts at an Iranian missile base on the outskirts of Tehran killed at least 17 people, including Major General Hassan Moggadam, a prominent figure in the notorious Revolutionary Guards who was also a key architect of the country's longrange-missile program. Iranian officials claim the incident was an accident, but a Western intelligence source tells TIME it was carried out by the Israeli spy agency Mossad. Iran's nuclear program has been the subject of global attention since the release of a report by the IAEA, the U.N.'s nuclear watchdog, claiming the Islamic Republic

intends to produce nuclear weapons, Israel, which cannot countenance the prospect of a nuclear-armed Iran, is likely to have been behind a number of attacks on Iran's nuclear program in recent years, including explosions at some facilities, the murders of Iranian nuclear scientists and cyberattacks on state computer systems. The Iranian leadership's refusal to point the finger at Israel this time could be a symptom of Tehran's discomfort at being unable to defend its own sites. But it also could be that Iran doesn't want to escalate the situation-meaning Israel can still covertly chip away at Iranian nuclear ambitions.

A History Of Violence

2 GERMANY A clandestine cell of neo-Nazis, unnoticed by German intelligence, was discovered to have murdered at least 10 people over the past decade. At least nine victims were immigrants, mostly Muslim Turks. The murders were unearthed after the apparent suicides of two of the neo-Nazis. prompting national hand-wringing over the prevalence of such hateful, farright elements.







Beate Zschäpe, top, an alleged member of the cell, turned herself in after the apparent suicides of the two men above



Monti needs to carry out a raft of key structural reforms to Italy's economy

Send in the Technocrats

3 ITALY After a torrid week of political wrangling, the man tapped to replace outgoing Italian Prime Minister Silvio Berlusconi took charge of the nation at the center of the euro-zone storm. New Prime Minister Mario Monti, a former E.U. commissioner, brought in a Cabinet full of career technocrats rather than politicians. Monti's team of ex-bankers and ex-CEOs will have to steady the country's debt woes and most likely will institute austerity measures that may prove as unpopular as those implemented in Greece. Monti also has to deal with the shadow of Berlusconi, who still wields great influence.





City of Dog

4 BRAZIL A boy in the Rocinha slum of Rio de Janeiro watches a police officer on patrol pass by. Thousands of Brazilian troops and police raided the favela—home to some 100,000 people—in a crackdown on criminal drug gangs that flourish there. Authorities deemed Rocinha "pacified" and will maintain a permanent police presence in the shantytown ahead of the 2014 World Cup in Brazil and the Olympics, which Rio will host two years later.

Uncle Sam Down Under

5 AUSTRALIA On a state visit. **President Barack** Obama and Australian Prime Minister Julia Gillard agreed on the presence of U.S. troops on Australian soil for the first time. The Pentagon won't set up new bases; it will use existing Australian facilities, Obama denied the move is a response to the growing challenge of China's expanding navy, but it's clear the U.S. is keen to

reinforce its long-

in the Pacific.

standing supremacy

Where active-duty U.S. troops are deployed

NORTH AFRICA. WESTERN H HEMISPHERE AND ELSEWHERE 5.7%

FUROPE 7% EAST ASIA

86.4%

U.S. TERRITORIES

Enemies Everywhere

6 | SYRIA The isolation of President Bashar Assad grew after some of his closest allies wiped their hands of his embattled regime. The Arab League suspended Syria as a member after Assad refused to curb his brutal onslaught against protests. Turkish PM Recep Tayvip Erdogan said Assad may enter history as a leader "who feeds on blood." Turkey scrapped a planned oil deal with Syria and threatened to cut off electricity exports. Meanwhile, dissident fighters reportedly attacked a Syrian military base.

'His iron hand and toughness ... impressed the Russians a lot. He became the antiterrorist No. 1 and the

national hero.'

CONFUCIUS PEACE PRIZE COMMITTEE, an

Chechnya—a war many consider brutal and heavy-handed



Nation

The Big Questions

By Mark Halperin

His rivals keep getting unhorsed. For Mitt Romney. could things get better? He's the early-state, polling and fundraising leader, but Romney also has secret weapons that could help him wrap up the nomination early or allow him to survive if he stumbles when the voting starts in January. In reserve: privately pledged political endorsements that the campaign will unfurl for maximum impact, extensive opposition research on all his rivals, unmatched knowl-

edge of the delegate rules that

ultimately determine the nom-

inee, and vast personal wealth,

largely untapped so far, avail-

able for TV ads and other ex-

pensive campaign goodies.



So what is keeping him up at night? Romney remains a feeble

front runner, stuck at about 25% in national polling. He is particularly weak in two early-primary states,

sent an Iraq veteran

to the hospital with

6. CHICAGO 10/23

Nearly 130 protest-

ers were arrested for

loitering in Grant Park

a skull fracture.

after dark.

Iowa and South Carolina. which were killing fields for him in 2008. An early loss or two to a surging rival would show a lack of strength that could worry even some of Romney's backers. His team

is confident he will eventually prevail in the nomination battle, but an extended one-on-one fight against a candidate with socialconservative and Tea Party credentials could drain Romney before the general election against the President.

Can he unite the party as George W. Bush and Ronald Reagan did?

Many Republicans remain unenthusiastic about Romney. They are distrustful of his recent public conversions on abortion, gun control and gay rights or turned off by his Massachusetts health care law. On his own, he will never rouse the party with the same fervor Bush and Reagan did, but if Romnev wins the nomination. Barack Obama might be able to do that for him.

OCCUPY **Fall Sweeps**

Police and protesters clash 1. MANHATTAN

11/15 Police cleared Zuccotti Park at 1 a.m., and protesters moved to nearby Foley Square, A court later allowed their return but forbade tents and generators.

2. LOS ANGELES 11/15 As protesters marched to condemn the Zuccotti raid, police helicopters were on alert until protesters agreed to return to camp

3. PORTLAND, ORE. 11/13 Police cited drug use and other conditions as reasons for razing the tent city.



SUPREME COURT **Obamacare Gets** Its Day(s) in Court

RECALLS

In announcing that the Supreme Court will take up the 2010 health care reform law in March 2012, the Justices allotted five and a half hours over two days for oral arguments, the most in nearly half a century. The generous timing (as of 1970. most cases get just an hour) is a nod to the intricacies of the issues the court will

weigh, including the central

mandate's constitutionality.

question of the individual

Hours of oral argument



Voting Rights Act (1966)





Pentagon_ Papers (1971)

Bush v. Gore (2000)1.5

YES, send my FREE Priority Mail Flat Rate™ Shipping Kit.*

Carrier States	To get your FREE Flat Rate Shipping Kit: • Mail in this card or • Visit prioritymail.com/kit100
DE CONTROL	G G G G G G G G G G G G G G G G G G G

First, please tell us a few things about your shipping:

- 1. I will be using my new Shipping Kit: Please check one. at home (kit contents may vary) at work
- 2. Who/where do you ship to? Please check all that apply. ☐ Businesses ☐ Consumers ☐ International addresses
- 3. On average, how many packages do you ship daily? □ <1 □ 1-4 □ 5-8 □ 9-19
- 4. Of your overnight and 2-3 day shipments, about what percentage are boxes compared to envelopes?
- ☐ 100% boxes 25% boxes/75% envelopes ☐ 50% boxes/50% envs. ☐ 75% boxes/25% envelopes
- ☐ 100% envelopes

- 5. Have you used Flat Rate Boxes previously? ☐ No ☐ Yes, within the past year
- ☐ Yes, more than a year ago
- 6. What percentage of your shipping volume is with USPS*?
- □ None □ 1%-24% □ 25%-49% □ 50%-99% □ 100% 7. Number of employees at your location:
- □ 1-4 □ 5-9 □ 10-19 □ 20-99 □ 100+ * Offer ends 2/29/12 and is only available while supplies last. Offer valid for one customer per address
- The Eagle Logo, the Letter Carrier Uniform, and the trade dress of USPS* Packaging are trademarks of the U.S. Postal Service: EP18978





Priority Mail Flat Rate™ Boxes from the Postal Service™ make shipping simple. If it fits, it ships anywhere in the country for a low Flat Rate. There's no need to weigh anything up to 70 lbs. Five box sizes to choose from, shipping starts at \$5.20.

Scan this code with your smartphone to request your free Flat Rate Shipping Kit[†] at prioritymail.com/kit100

A simpler way to ship.



For mailable items up to 70 lbs. Visit USPS.com for details. †Offer ends 2/29/12 and is only available while supplies last. Offer valid for one customer per address. Privacy Notice: For more information regarding our privacy policies, visit usps.com/privacypolicy



NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES



Natio

His rivals keep g

horsed. For Mitt could things get He's the early-state

fundraising leader ney also has secret that could help hir the nomination ea him to survive if h when the voting st ary. In reserve: privatery

pledged political endorsements that the campaign will unfurl for maximum impact, extensive opposition research on all his rivals, unmatched knowledge of the delegate rules that ultimately determine the nominee, and vast personal wealth, largely untapped so far, available for TV ads and other expensive campaign goodies.

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO.73026 PORTLAND OR

POSTAGE WILL BE PAID BY ADDRESSEE

US POSTAL SERVICE PO BOX 780 PLAINFIELD IN 46168-9944

ուսարկի հերգիլիի հայկակիլի հիրկիրի կորու



So what is keeping him up at night?

Romney remains a feeble front runner, stuck at about 25% in national polling. He is particularly weak in two early-primary states, Iowa and South Carolina. which were killing fields for him in 2008. An early loss or two to a surging rival would show a lack of strength that could worry even some of Romney's backers. His team ney. They are distrustrur of his recent public conversions on abortion, gun control and gay rights or turned off by his Massachusetts health care law. On his own. he will never rouse the party with the same fervor Bush and Reagan did, but if Romney wins the nomination, Barack Obama might be able to do that for him.

OCCUPY Fall Sweeps

Police and

protesters clash 1. MANHATTAN

11/15 Police cleared Zuccotti Park at 1 a.m., and protesters moved to nearby Foley Square. A court later allowed their return but forbade tents and generators.

2. LOS ANGELES 11/15 As protesters marched to condemn the Zuccotti raid, police helicopters were on alert until protesters agreed to return

to camp 3, PORTLAND, ORE. 11/13 Police cited drug use and other conditions as reasons STRONG 4. DENVER 11/12 Riot police tore down tents and confiscated property after campers did not clear out

99%

5. OAKLAND 10/25 Clashes with police sent an Iraq veteran to the hospital with a skull fracture.

6. CHICAGO 10/23 Nearly 130 protesters were arrested for loitering in Grant Park after dark

RECALLS

SUPREME COURT **Obamacare Gets** Its Day(s) in Court

In announcing that the Supreme Court will take up the 2010 health care reform law in March 2012, the Justices allotted five and a half hours over two days for oral arguments, the most in nearly half a century. The generous timing (as of 1970, most cases get just an hour) is a nod to the intricacles of

the issues the court will

question of the individual

weigh, including the central

mandate's constitutionality.

Hours of oral argument

Rights Act Brown v. Board of Education II (1966) 13.25

Health Care v. FEC

Reform 5.5 Bush v. Gore

Pentagon_ Papers (1971) (2000) 2 1.5

for razing the tent city.

If it fits, it ships" for a low Flat Rate.





Priority Mail Flat Rate™ Boxes from the Postal Service™ make shipping simple. If it fits, it ships® anywhere in the country for a low Flat Rate. There's no need to weigh anything up to 70 lbs. Five box sizes to choose from, shipping starts at \$5.20.

Scan this code with your smartphone to request your free Flat Rate Shipping Kit[†] at prioritymail.com/kit100

Priority Mail® Flat Rate
A simpler way to ship.



^{*}For mailable items up to 70 lbs. Visit USPS.com* for details.

[†]Offer ends 2/29/12 and is only available while supplies last. Offer valid for one customer per address. Privacy Notice: For more information regarding our privacy policies, visit usps.com/privacypolicy

^{©2011} United States Postal Service* All Rights Reserved.

The Eagle Logo, the Letter Carrier Uniform, and the trade dress of USPS* Packaging are among the many trademarks of the U.S. Postal Service*

Business



Big Deal. Are investors gearing up for Groupon remorse? By Brad Tuttle

GROUPON'S IMPRESSIVE \$700 MILLION IPO ON NOV. 3—THE LARGEST tech IPO since Google's—certainly left investors smiling. But the daily-deal giant has yet to prove that its business model works for vendors and customers.

Groupon's model is a mixed bag for businesses. More than onequarter of vendors offering a daily deal lose money on the venture, a Rice University study found, and another 18% merely break even. Even when a deal helps a vendor's bottom line, it may end up hurting its reputation. A study analyzing customer ratings at Yelpcom found that reviews mentioning "Groupon" or "coupon" rated their experience 10% lower than the business's average score.

And what about the deals on offer? Fashion lovers may tire of the action in the deal mpulse buying on flash deal sites if the yfind bigger discounts at staid online outlets like Overstock.com. Competition from bigger players like Amazon and Google, which now offer their own daily deals, could also cheapen the Groupon name. "The quality of the offer becomes more and more important," says Jim Moran, a co-founder of daily-deal ageregator Yipit.com

It's worth remembering that one-third of daily-deal sites were bought or went out of business in 2011. That could be a sign of Groupon's enduring popularity or the beginning of the end of the daily-deal craze.

Black Friday Goes Ballistic

Remember when Black Friday was confined to one manic day of megadiscount holiday shopping? For better or worse, the timehonored tradition of stampeding into your local big-box retailer the day after Thanksgiving to fight your neighbor for the last Tickle Me Elmo is going turbo. Retailers bracing for weak holiday-season turnouts are rolling out Black Midnights and even Black Novembers to attract more preholiday bargain hunters and beef up year-end sales. Target, Best Buy and Kohl's are

inaugurating a 12 a.m. opening the night of Thanksgiving. Even retailers like Gap and Banana Republic are hopping on the Black Midnight train. And Walmart, not to be outdone by its big-box competitors, is opening two hours earlier.

The lack of sleep and time away from the family will be hard on employees, especially since online retailers may have beaten their brick-and-mortar counterparts to the punch. Amazon.com started rolling out its deep holiday discounts on Nov. 1. And those deals don't require putting up with disgruntled sales clerks or hour-long lines. -IOSH SANBURN

'Tis the season Retailers have already started offering holiday shopping discounts



SPENDING

Shopping Is Up, Despite Worry

Consumer confidence is at its lowest But new-vehicle sales are on pace to top

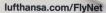
grocery and restaurant sales are up

31





ources: Thomson Reuters, University of Michigan; Commerce Department; Ward's Auto



Airmail

A product of Lufthansa.

Introducing another first: FlyNet Wi-Fi on transatlantic flights.

and smartphones. So you'll never be far from the people who



There's no better way to fly. Lufthansa

LET'S TALK ABOUT BEING RANKED #1 IN CLIENT SATISFACTION.

OR TALK TO ANY SCHWAB CLIENT.

#1 IN ONLIN BROKERAG CUSTOMEI SATISFACTIOI ACCORDING TO THE AMERIC At Schwab, satisfying our customers is our #1 priority. Maybe that's why the American Customer Satisfaction Study ranked us the top company in the online brokerage industry. And almost half of our new clients come from referrals. So if you're looking for an investment firm that makes

you its top priority, choose the one that came out on top.

Call 1-800-4SCHWAB. Visit schwab.com. Drop by a branch.

Or talk with a Schwab client you know.





Employees

by industry

12,000

34,000

Mining and logging

Education services

leaving,

Economy

Quitting Time. More people are telling the boss to shove it—and that's good news

With 14 million people unable to find work and job prospects seemingly bleak, why are more employees calling it quits? In September, about 2 million people gave notice, the highest number of monthly resignations since November 2008. Economic downturns typically

decrease worker satisfaction as employers cut staff and pile on the work. Yet the proportion of the workforce that took a hike reached its lowest level in a decade in early 2010 as fear trumped unhappiness on the job. This year. resignations have risen steadily. And as more 69,000 people leave, employers may finally be forced to hand out raises. According to a recent survey by Financial activities job-search site Snagajob, 44% of respondents who quit in the past year did so believing they would find a better opportunity elsewhere, up from 31% the year before. - STEPHEN GANDEL Monthly quittings as a Construction percentage of total employment 103,000 Manufacturi Hiring didn't dip as much 126,000 in health 2007 '08 '09 '10 '11 care as in Government other sectors Health care and social assistance 426,000 Professional and business services 474,000 Trade, transportation and utilities tage of industry is calculated by quittings in September as a percentage of a sector's total employment. Not all industries included. Source: Bureau of Labor Stati

INVESTING

Buy American Buffett bets on a U.S. rebound

Most Americans may feel down about the economy. But not Warren Buffett. His company, Berkshire Hathaway, invested nearly \$24 billion in U.S. firms in the third quarter, its biggest three-month buying spree in 15 years. Buffett bought 4.4% of IBM for \$10.7 billion, Another addition was chemical maker Lubrizol. Buffett has long favored safe consumer-products companies such as Coke and Dairy Queen, so by investing in an industrial company and a tech giant, the Oracle of Omaha moved out of his comfort zonesomething he rarely does unless he's figured something out. The message seems to be:

just yetespecially those with global reach. -DAN KADLEC

Don't give up on U.S. businesses

WASTE Time Is Money

Amount U.S. workers lose each year waiting for repairs, installations or deliveries. Which is .



37 min per worker per year Source: Cost of Walting Survey, TOA Techn



Evelyn Lauder By John Demsey

When I joined the Estée Lauder Companies 21 years ago, part of my orientation included having tea with Evelyn Lauder. From the moment I met her. I understood what it meant to work for a family: that the brand. the company and the family were one and the same. Evelyn, who passed away Nov. 12 at 75, built the business alongside her husband Leonard and Estée Lauder. A former New York City schoolteacher, Evelyn was vital in developing the company's unique training and education programs.

Evelyn wanted everyone she met to truly be part of her family. She

loved her work and embodied the heart and soul of the company, but most of all, she loved helping others. When Evelyn had a brush with breast cancer many years ago, she wanted to make a difference by mobilizing scientists to find a cure. So in 1992 she established the Pink Ribbon campaign and one year later the Breast Cancer Research Foundation, which has raised more than \$350 million. In the beginning, the pink ribbons were handed out at Estée Lauder and Clinique counters. Then the idea expanded into a global effort. She raised awareness among women about the importance of getting mammograms, believing that early detection was the best cure, and she was instrumental in making that examination a part of women's health routines around the world. Evelyn's vision, her tenacity, her ability to make emotional connections and tell stories taught me a great deal, but it's her generosity that permeates all my memories of her and everything about the companies she helped build.

Demsey is group president of the Estée Lauder Companies and founder of the MAC AIDS Fund



Bil Keane

In a world of snarky comic strips, there was virtually nothing controversial about The Family Circus, the circular, single-panel strip drawn by Bil Keane for more than 50 years. Keane, who died Nov. 8 at 89, was the creator of wholesome Americana centered on Mommy, Daddy and their four children and steeped in his wry humor. Full of puns and clever devices—like the character Not Me!, a phantom who took the blame when the kids got into mischief—The Family Circus is syndicated in more than 1.500 newspapers

Keane was a self-taught artist who drew cartoons for Stars and Stripes during World War II. While posted in Australia, he met his wife Thelma, a native Australian who inspired the character Mommy and was the mother of their five children. For years, Keane sketched out panels that were then completed by his youngest son, Jeff, who plans to carry on the strip. "I don't just try to be funny," Keane said in a 1990 interview. "My cartoons are not a belly laugh. I go for nostalgia, the lump in the throat, the tear in the eye, the tug in the heart." -NATE RAWLINGS

Henry Owen, 91. in the State Department under four Presidents: Owen helped create the **Trilateral Commis**sion discussion group in 1973.

The first U.S. trial of human embryonic stem cells, because of costs; working without federal funding, the biotech firm Geron was exploring paraly treatments.

PLAYED The first college basketball game ard an active



aircraft carrier; on Veterans Day, No. 1-ranked North Carolina defeated Michigan State 67-55 in the Carrier Classic on the flight deck of the U.S.S.

William Aramony, Carl Vinson in San Diego Bay.

84; as chief execu-Patrick Witt: to

tive of United Way. he built a powerful coalition of charities but was jailed in 1995 for conspir acv. fraud and theft of \$600,000

CHOSEN By Yale quarterback

play against rival Harvard and forgo his final interview for the Rhodes Scholarship, which is scheduled for the same day.

Irving Franklin, 93, co-founder of Franklin Sports, who teamed with Philadelphia Phillies third baseman Mike Schmidt to design the modern base ball batting glove.

Only AT&T's network lets your iPhone download 3x faster



on the iPhone 4S.



The Penn State Effect

Will the breakdown of morals in State College herald a new era of responsibility?

ORAL DEBATES ARE OFTEN, BY their very nature, difficult, nuanced. But a key question about the allegations of sexual abuse at Penn State is neither of those. Should Mike McQueary, the young coach who said he stumbled upon a rape in progress, have called the police rather than kept the evidence of rape by longtime defensive coordinator Jerry Sandusky within the university? Yes, he should have. That he was not required to do so speaks poorly of a national patchwork of reporting laws that give too many people, including former head football coach Joe Paterno, room to do the wrong thing. (McOueary now claims he contacted the police, though there is no record of it.)

Arthur Schlesinger Jr. used to caution historians against the natural human tendency toward moral hubris when assessing the failures of past generations. "Self-righteousness in retrospect is easy-also cheap," he would say.

From the safety of distance or of posterity, we imagine ourselves succeeding where others failed. Hence the cultural ritualone exacerbated by the immediacy of technology that allows everyone to weigh in on everything all the time-of head-hanging over the mistakes and sins of others.

Sometimes, though, all we can do is hang our heads, and Penn State offers us one of those times. I am not a football fan, so I freely admit that the appeal of the cult of Paterno eludes me. The reports out of State College, Pa., of fans mourning the fall of the coach rather than the fate of the alleged victims of sexual abuse by a longtime Paterno assistant strike me

One's legal responsibility is not the same as one's moral responsibility. Which raises a question: How do we legislate moral responsibility?

as bizarre. "The only thing I can think of is Joe sitting at home for the first time in 62 years," an admirer named Frank Lorah told the New York Times the day of the first game after Paterno was fired.

Well, Mr. Lorah, here is something else to think about: McQueary's grand jury testimony years later about the rape he witnessed is so sickeningly detailed that he must have lived and relived that heinous moment many times over.



Presumably the victim, thought to have been about 10 years old, has too.

McQueary was an eyewitness to a crime. Yet to fulfill his obligations under Pennsylvania law, he needed to tell only his superior, not the police or any other public authority. The governor of the state, Tom Corbett, has since said he believes changes to the statute are coming soon. It is too late for Sandusky's alleged victims-he has been charged with 40 counts involving eight boys-but new requirements may help others.

Every state-every institutionshould require anyone who witnesses such a thing to report it to the police or child services rather than only to an internal manager. McQueary and Paterno's superiors were bound by statute to report what they'd been told outside the university. (They did not, which is why they are under indictment.) What McQueary and Paterno did was thus within the letter of the law.

One's legal responsibility, though, is not the same as one's moral responsibility. Which raises a question: How do we legislate moral responsibility? Or, more precisely, can we legislate such responsibility?

The world-weary answer is no-that no law, no statute can make people do the right thing if they do not want to do it. This is the Hobbesian view: strife is the natural state of mankind, and any effort to soften the harshness of reality is doomed.

Yet life does not always have to be about self-interest and self-preservation. The sad duty of politics, Reinhold Niebuhr wrote, is to establish justice in a sinful world. No single law or regulation will bring about human perfection, but two central purposes of the state-of society-are to protect the weak and to encourage the good. Laws are about making us do the things we ought to. While there is no perfect statute, to make the perfect the enemy of the good when the safety of children is at stake is wrongheaded. The right kind of reporting laws, coupled with genuine sanction, may make the next McQueary do the right thing. After all, there was nothing ambiguous about what McQueary said he saw; it was not "horseplay," the term Sandusky used in an interview with NBC's Bob Costas in which he denied the charges.

We may be entering a new cultural cycle on the issue of child sexual abuse. In the wake of the 1980s McMartin day-care hysteria in Los Angeles, in which the innocent were wrongly accused of predatory behavior, we retreated from declaring there were monsters among us. That began to change in the early 21st century with the relentless reports of widespread abuse in the Roman Catholic Church. We can hope that there will now be a Penn State effect: that those who see something will say somethingto civil authorities with a larger interest in justice than in a football game or an old pal. If we make the moral thing the legal thing, we will be that much closer to providing protection to the least of these. Which is the least we can do.



My friends think I paid a lot for this living room.



And I'm OK with that.

#1 Name In Furniture



Attack of the Euro Wonks

Political, not technocratic, leadership is what the euro zone needs now

TALIANS HAVE A NAME FOR THEIR NEW leadership Government Sachs. It's a nod to the fact that the technocrats taking over Buropean governments have shockingly similar backgrounds. "Super Mario" Montl, Italy's Prime Minister, and Lucas Papademos, the new head of Greece, are both U.S. trained economists who were top E.U. bureaucarts before taking on their current posts. Monti did a stint at Goldman Sachs, as did the recently appointed head of the European Central Bank, Mario Draghi.

On the one hand, it's reassuring to have a man who taught a class at Harvard's Kennedy School titled the Global Financial Crisis: Policy Responses and Challenges heading an economic basket case like Greece. On the other, it was Goldman that helped devise the derivatives that allowed Greece to disguise its massive debt in the first place. It also raises some tricky issues. In the U.S., one of the threads concerting the Tea Party and Occupy Wall Street is the belief that there's an entitled left running the show, exemplified by the revolving door between the U.S. Treasury Department and Goldman Sach (1).

In Europe there's a sense that many of the people in favor of keeping the common currency are part of a cosmocratic elite represented by the likes of Super

mon currency are part of a cosmocratic elite represented by the likes of Super Mario and his crew. Average people would be glad to secede from the union and resume being themselves. Italians and Greeks could devalue their currencies and go back to la dolce vita; Germans could get back to work. Everyone would be happy.

Of course, it's not that simple. A fullscale breakup of the euro zone would hurt every nation in Europe. The countries are now too economically enmeshed for anyone to disengage easily. And the euro zone, in the midst of a worsening debt crisis, absolutely needs leaders who understand bond rather than bikini curves (arriveders, Berlusconi). But Europe also needs real political buy in from its electorates to complete the hard work ahead carrying out extremely painful cuts to pensions, health care, education and social programs, while trying to reform tax systems and black markets. Why should we expect unelected technocrats to do better than popularly elected officials?



Part of the answer to that question lies in how fast the technocrats can bind the gaping wound that is the euro zone. While markets rose briefly with the resignation of Berlusconi and the formation of a new government in Greece, bonds tell the true story, and the spread be tween German yields and those of Italy and France are at euro-era highs, meaning investors are still plenty worried. No wonder. European industrial production is flagging, consumer confidence is nil, and growth-a mere 0.2% in the past quarter-is kaput. A double-dip recession, says Barclays Capital economist Michael Gavin, "is now baked into the pie."

To turn this tide, the technocrats first need to bring the political frings to gether. Political extremism has grown as the economy has worsened. Monti knows this and has already talked about having various political factions in Italy sit down and parse all the compromises needed to balance growth and austerity. Sounds good, yet it makes me nervous that his model for this sort of come to-Jesus moment is the U.S. Congress budget supercommitte—the one poised to deliver bookkeeping gimmicks everyone will hate. Apparently, Monti views it as a model for reaching bipartisan agreement. Hmmm.

Putting aside the obvious question marks there, the last thing Europe needs is

a supercommittee. What it needs is what it has needed all along: real political leadership from real politicians. There's only one person who can fill that role right now-Angela Merkel. I am relieved to see that Merkel seems to have progressed from halfhearted crisis management to real advocacy of the euro and the union. You can hear it in the urgency of her words. She recently told her party that Europe is facing "the most difficult hours since World War II" and what was needed was "not less Europe, but more." She implored Germans to embrace the task of their generation, "to complete the economic and currency union in Europe and create, step by step, a political union."

These words-the strongest Merkel has uttered since the crisis began-are Europe's best hope. Now she has to persuade her electorate to back the talk with German money. Even if the technocrats clean up Europe's weakest economies tomorrow, the weaklings are going to need the stronger nations like Germany to bolster them-either by supporting European Central Bank efforts to do so or by issuing common bonds with the promise that Germans will stand behind Italian debt because they are all citizens of Europe. It's a solution that is as emotional as it is technocratic. But it's exactly what Europe needs right now.



STRENGTH IN NUMBERS HUMANITY IN NUMBERS KNOWLEDGE IN NUMBERS COMFORT IN NUMBERS HEALTH IN NUMBERS**

► KNOWLEDGE Life is meant to be lived to the fullest. But when you face medical issues, things can get complicated. You get prescribed one drug one place and another somewhere else. And sometimes, if you wind up taking both drugs together, you could be in real trouble. That's why UnitedHealthcare offers tools that spot potentially dangerous drug interactions. So we can warn your pharmacist before your prescription is filled. We even alert your physician in cases of a potentially harmful drug-disease interaction.

At UnitedHealthcare, we're using our experience and our access to a vast range of health care information to make health care simpler and more responsive. So you can take your medicines safely - and get back to living life. We're more than 78,000 people looking out for 70 million Americans, that's HEALTH IN NUMBERS*.



LET'S LIGHT UP OUR CITIES WITH A CLEANER SOURCE OF ELECTRICITY.

We all need electricity to power our lives. Shell is helping to deliver natural gas to more countries than any other energy company. When used to generate electricity, it emits around half the CO₂ of coal. It's one of the most abundant sources of energy available today and, with our continued innovation, it could provide us with cleaner energy for the next 250 years. Let's power our future with gas.

www.shell.us/naturalgas

LET'S GO.





Fareed Zakaria



How to Be a Real Superpower

China has enjoyed peace, stability and free trade. It should also help produce them

paign has not been noteworthy for its discussion of foreign policy. But the Month of the Month o

Ever since Richard Nixon and Henry

Kissinger opened the door, the Republican Party has been the party of engagement with China. Democrats have often campaigned on tougher platforms. So why is Romney-a moderate Republican who is trying his best not to make news during this primary campaign-making this sharp break? The answer can be found in the polls. One of the consequences of this Great Recession is that the American public now has an unreservedly hostile view of China as a job stealer and economic threat. A recent Pew Research Center poll found that more than half of Americans see China's growth as bad for the U.S. Romney's shift reflects the fact that even business-the core constituency for good relations with China-is changing its views. As Beijing has adopted policies to favor Chinese companies over foreign ones and refused to crack down on rampant intellectual-property theft, businessmen in the U.S. have become less starstruck and more worried

Americans aren't the only ones concerned. In Africa, where Beijing has lavished attention, investment and aid in exchange for natural resources and energy, China has emerged as a paramount foreign policy issue. In the recent presidential campaign in Zambia, there was little discussion of the U.S., the West or necoclonialism, but one candidate, Michael Sata, argued that the Zambian government had sold out the country's economic interests to Beijing. The issue caught on, and no wonder: Zambia's chief export is copper, and Chinese state-owned



companies buy a lot of it. (Such is their influence that when Sata won the election, he quickly made peace with Beijing, throwing a lunch for Chinese investors in October and promising good relations.)

Across Asia, China's every move is now watched with great attention. In 2010, as China asserted its sovereignty over disputed waters and islands in the South China Sea, it rattled neighbors from lapan to South Koria to Vietnam. This year Beijing has been more diplomatic, but tensions persist. At the Asia Pacific Economic Co-operation (APEC) summit on Nov. 12-13, many leaders echoed Singapore's Prime Minister when he said the U.S. was well-come in the region and that it is researce.

would "do good." The U.S. announced on Nov. 16 that it would for the first time establish a formal military presence in Australia—a base in all but name.

The Obama Administration is now

quietly re-engaging in Asia, reversing the troop cutbacks of the Bush Administration, which was more focused on Iraq and the Middle East. Asian diplomats had often complained that U.S. participation at regional summits was too low-level. Obama's attendance at the APEC summit marks a shift in that approach.

China might well view this as the start of a containment policy. It's not. But the Chinese authorities should reflect on the changing attitudes toward their

country, from businessmen in the U.S. to peasants in Africa to diplomats in Australia. People are waking up to China's enormous impact on the world, and that leads to very close scrutiny of everything China does—and does not do. Beijing is being held to a higher standard, a superpower standard. This is the way the world has looked at the U.S. for decades. Welcome to the club. What's works well works and the China.

what swortsome is that China seems content to act harmonly and exclusively in its own interests, unconcerned about helping maintain global rules. It is happy to consume peace, stability and free trade while doing little to produce any of these public goods. When it does try to project values, its actions seem even more worrying. Consider the awarding of the Confucius Peace Prize, China's version of the Nobel Peace Prize, China's version of the Nobel Peace Prize, the awarding of the Confucius Pose Beijing

We often hear calls in the U.S. for Washington to forge a new China policy. Doubtless we could do better, but the country that really needs a new China policy is China. Beijing needs to understand its new position in the world and act in ways commensurate with its power. Otherwise, Romney's statements will be the first of many, and they will come from places far beyond the U.S.

seriously think this will help its image?



NEW NEW NEW NEW

Right on schedule, Gingrich surges in the polls. Can he force a showdown with Mitt Romney?

ly Michael Crowle

EWT GINGRICH WAS GRINNING like a benchwarmer who'd just broken into the varsity lineup. A local GOP official had introduced him to a packed room of supporters in Jefferson, Iowa, as the Republican presidential race's new front runner. "That's the first time that anybody anywhere has introduced me as the leading candidate," Gingrich said. And that has the sometimes grumpy former Speaker in an excellent mood.

He has come a long way from midsummer, when he confronted what he describes as a "near death experience": humiliating poll numbers, scorn and ridicule from erstwhile allies, a mass defection of his top aides and a cash-flow crisis. "I would call people and say, 'Hi, would you like to donate?," he recalls. "And they would say, 'But you're dead!'" He calls June and July "the worst two months of a 50-year career."

But suddenly, and right on schedule, Gingrich is back-surging in the polls and emerging as the latest conservative alternative to former Massachusetts governor Mitt Romney, whose money, experience and smarts have not been enough to win over the GOP faithful, Gingrich is casting himself, despite his 20 years spent burrowed into Washington, as the only candidate with grand enough ambitions for shattering the capital's despised ways of doing business. "I'm very different from traditional politicians," Gingrich told his Jefferson audience, "We're going in the direction of very bold, very dramatic change ... If you're dealing with an elephant-size

problem, you should not come in with a chipmunk-size solution."

Antiattack Mode

CRITICS MIGHT SAY GINGRICH ALSO HAS AN elephant-size self-regard, one that tends to trumpet and stamp at moments like this. But Republicans can't afford to dismiss him anymore; Gingrich has spent the fall delighting debate audiences with his confident command of the issues, his withering disdain for the media and his knack for sound bites that shock mainstream sensibilities while thrilling the GOP base. In one recent debate, he suggested that Congressman Barney Frank be imprisoned for allegedly enabling the housing crisis: in another, he announced that Fed Chairman Ben Bernanke should simply be fired. And Barack Obama? He's a "food-stamp President." Until recently,



Risers Ginarich, with wife Callista, at a campaign stop in Carroll, Iowa

some observers suspected that Gingrich staved in the race this summer to peddle his many books and DVDs. Now they concede that he has a real shot at the nomination.

In Romneyland, the question is how badly Gingrich wants it. If he were serious, would he really have spent so many summer days on a Greek cruise and a campaign swing through the not-so-crucial primary state of Hawaii, which happened to coincide with his wedding anniversary? Thus far, Gingrich has largely avoided attacking his opponents. He will freely accuse Obama of having a "Kenyan, anticolonial" worldview, but he's less comfortable waging intraparty warfare, which he says only rewards Democrats and amuses the media. He recently paid Romney the backhanded compliment of calling him a "competent manager," the equivalent, in Gingrichspeak, of a parking attendant. Romney's team is waiting to see whether it gets worse. No one enjoys being the target of Gingrich's wicked tongue. But for now, Gingrich insists he can win the nomination without slashing and burning, much as Ronald Reagan did in 1980. "Reagan didn't spend much of his time attacking anybody," he says. "That is sort of the model for me."

Gingrich has had the luxury of go-

ing easy on his rivals because they keep falling apart. In the casting call for the Tea Party's anti-Romney warrior, Tim Pawlenty has dropped out, Michele Bachmann has flared and fizzled, Rick Perry steps on a different banana peel every week, and Herman Cain is hamstrung by sexual-harassment charges and an apparent cluelessness about foreign policy. Now comes Newt. A Nov. 14 CNN/ORC survey showed Gingrich statistically tied for first with Romney, at 22% to Romney's 24%. Recent Iowa polls paint a similar picture, giving Gingrich a shot at winning the campaign's first official vote, on Jan. 3-a victory that could hurtle Gingrich into a head-to-head showdown with Romney for the nomination. The money is rolling in again-his campaign says it has raised \$3 million since Oct. 1-not a lot, but a lot more than it was raising a month before-and he is hiring new staffers in the key primary states.

"Romney has seen a succession of challengers rise and fall, and now it's Newt's turn to rise," says Vin Weber, a Washington lobbyist and former Representative who served in the House with Gingrich and considers him a friend. "What separates him is that Newt is obviously qualified to be President. That was not so obvious of the previous candidates."



His Own Best Adviser

QUALIFIED, PERHAPS, BUT CAPABLE OF WINning? Even some admirers wonder. Gingrich has a knack for sabotaging himself. as he did when his special mix of hubris and petulance when he was House Speaker allowed Bill Clinton to use him as a foil for his 1996 re-election. Or when he overplayed the GOP's hand by pursuing Clinton's impeachment two years later, inflicting damage on his party and leading his House GOP colleagues to oust him-even before they discovered he'd been carrying on an affair himself. And within days of announcing his campaign in May, Gingrich infuriated the right by proclaiming Republican Congressman Paul Ryan's budget plan, then under heavy fire from Democrats, "right-wing social engineering." Then came the stories about his cushy lifestyle-enabled by his multiple commercial venturesincluding private-jet travel and a \$500,000 revolving credit line at Tiffany. His unorthodox campaign schedule convinced top staffers that he wasn't a serious candidate: many quit.

There's little sign that Gingrich has been humbled, however. To the voters in Iowa, he presented himself as a change agent of epic proportions—a master of the politics, history and even science re-

quired to save America from what he calls "the secular, socialist machine." Here in Jefferson, he seemed determined to show off his firepower with a barrage of policy detail-a sort of Newtipedia that ranged from the crooked New York doctor who billed Medicare for 972 procedures in one day to the rich oil and gas reserves of the Arctic's Chukchi Sea to the tiny unemployment rate of North Dakota to the "fascinating potential in brain science." ("Every brain in this room has about the same number of synapses as there are known stars in the universe," Gingrich said.) It was a conspicuous contrast to, say, the rhyming slogans of Herman Cain. Lest anyone miss the point, Gingrich

Behind his grandiose rhetoric, however, Gingrich's platform is not so different from those of his rivals. He wants big spending cuts (though not for the military) and no tax hikes. He believes "Obamacare is a disaster" that should be repealed along with the Dodd-Frank financial-reform law, which he says stifles small banks. He favors far more domestic mining and oil drilling. More distinctive is his fixation

and clear whose ideas he was channeling." The actually my own adviser."
Gingrich, 68, calls this the sesence of
his appeal. Early in the campaign, he says
an in our interview, "what you had was a series of relatively unknown candidates" fill
high throle of GOP change agent, Gingrich
is convinced that now that he's back from
an an exile he blames mostly on the media,
Republicans will settle on an established
figure like himself. "Rushi Limbaugh loort
of captured it when he said after the first
driven the converse of the converse of the converse
adult in the room," Gingrich says.

Rabind his grandines rhetoric how.
Beachind his grandines rhetoric how.

on how Washington operates He offers to cut \$500 billion by applying a corporate management theory called Lean Six Sigma to the sclerotic federal bureaucracy. He complains that the widely respected Congressional Budget Office's "reactionary" assumptions about economic policy hamstring good lawmaking. And he says his appointess will need to undergo "Special Taining" to carry out his unique vision.

If Gingrich really wants to transform the culture of Washington, he may first need to transform his own image. Some Republicans think the mere fact that he's been married three times could disqualify him, and point to heresies and reversals in his record-including past support for an individual-health-insurance mandate and government action to combat climate change-that hardly make him seem an antidote to Romney, Gingrich is already under fire for taking at least \$1.6 million in political-consulting fees from the embattled federal mortgage giant Freddie Mac and then seeming to dissemble in a debate about the nature of his services.

Democrats, meanwhile, profess glee at the idea of running against a candidate whose heyday predates widespread e-mail use. "If Newt Gingrich gets nominated, can the George Michael comeback be far behind?" veteran Democratic opposition researcher Mike Gehrke guips. Then there are the numbers: a Nov. 15 Washington Post/ABC News poll finds that Gingrich is viewed unfavorably by 43% of Americans and favorably by just 32%; his standing is slightly worse with independent voters. Even if Gingrich has seen the last unflattering revelation about his personal or business dealings, it is safe to say that he faces a disciplined rival in Romney like few he has faced in the past. Gingrich insists he is making progress, and his campaign touts a Nov. 15 McClatchy/Marist poll showing him as the strongest Republican challenger to Obama, losing a hypothetical matchup with the President by just 45%-47% (and beating him among independents 47%-41%). "Contrast paychecks vs. food stamps," Gingrich says, "and I'm reasonably confident that we'll beat President Obama."

That still leaves his propensity to selfdestruct. "I talked with Newt over a year ago about running for President, and I think he clearly understood that selfdiscipline was his biggest challenge," says Weber. "And I just don't know if he still understands that. We'll find out."







BELOW THE LINE

For a decade, the ranks of the poor have been rising. Debunking myths about poverty in America could help change that

BY BARBARA KIVIAT
PHOTOGRAPHS BY JOAKIM
ESKILDSEN FOR TIME

THERE IS NO SINGLE ARCHETYPE OF AMERICA'S POOR.

They are low-wage workers, single mothers, disabled veterans, the elderly, immigrants, marginalized factory workers, the severely mentally ill, the formerly incarcerated, the undereducated and the fallen middle class. They live in Appalachia and the inner city and the wealthiest suburbs.

And they are growing in number. The poverty line is set at an annual income of \$2.2,314 for a family of four. Last year, 46.2 million Americans lived below it, the most since the U.S. Census Bureau began keeping track in 1959. The current poverty rate of 15.2% matches brief peaks after recessions in the early 1980s and '90s but otherwise hash't occurred since 1965.

It would be nice to think that this problem will disappear once the economy turns around. That almost certainly won't

happen. While the Great Recession and its double-digit unemployment have driven many families below the poverty line, the poverty rate has broadly been on the rise since 2000, which means that for years, it was growing along with the economy. That's a historical anomaly and an indication that forces much deeper than the unemployment rate are at play.

What does it mean to be poor in the U.S.? Not always what you think. It can't be measured solely by material deprivation: poor families might well own a car or subscribe to cable TV. That paradox stems in part from the inadequacy of using a single year of income to gauge poverty and not factoring in savings or expenses. A more realistic reckoning would account for a family's ability to make ends meet-to pay the electricity bill and put food on the table-and the Census Bureau has been developing standards along those lines. But there's also the fact that, the \$22,314 line notwithstanding, poverty is often a relative phenomenon, with indicators less absolute than contextual. Lacking indoor plumbing didn't signify poverty 150 vears ago; today it does.

These nuances aren't the only ones we tend to overlook about poverty. Below, the five most important myths—and how understanding them could help lead to solutions.

MYTH NO. 1: POVERTY DOESN'T LIVE IN THE SUBURBS

TO GRASP WHAT IT'S LIKE TO LIVE IN poverty in contemporary America, go to Baltimore—and then drive 25 miles (40 km) north to the suburban town of Edgewood (pop. 25,000), past the bigstone welcome sign and purple wildflowers. At the Edgewood Boys & Girls Club, parents picking up their kids tell stories of skipping church to conserve gasoline, of scorting a pair of s8 back-school shoes at Goodwill, of having pancakes for dinner because the cupboards were otherwise bare and the next paycheck was still aday away.

The quintessential landscape of poverty may be the inner city or rural hollow, but for more than a decade, suburban poverty has been growing



A PORT IN THE STORM

Jutiside New Orleans, Darla, 48, and Todd Rooks, 46, work on their ishing boat, where they also live, with the help of their grandsons pl, 7, and Eli, 3. Their home was destroyed by Kattrina, and after BP's il spill devastated fish stocks, they could no longer afford to rent.



faster. From 2000 to 2010, the number of poor people in the suburbs of the nation's 95 largest metropolitan areas grew by 35%, while the number in the cities themselves grew by 23%, according to an analysis of Census data by the Brookings Institution. Last year, one-third of the nation's poor lived in suburbs—a greater share than in cities (28%), small metropolitan areas (21%) or rural communities (19%). The suburban poor now outnumber the urban poor in Chicago, Cleveland, Minneapolis, Houston, Oklahoma City and Detroit.

Why the shift? Some suburbs are losing jobs, leaving their residents poorer. Others are adding jobs but in low-wage industries like retail, attracting poor families from elsewhere. Affluent suburbanites are moving to city centers, while new immigrants are heading straight to the suburbs, where they're faced with challenges like limited public transport and a lack of social safety nets. Resources for food assistance, job training, drug treatment, adult education, emergency housing and English-as-asecond-language classes are often sparser in suburbs unaccustomed to dealing with poverty and its web of related conditions. Health care for low-income families and the uninsured also lags, which is particularly troublesome since health problems both trigger and perpetuate poverty. Which leads to ...

MYTH NO. 2: POVERTY IS SIMPLY ABOUT NOT HAVING ENOUGH INCOME

JESSICA JAKUBAC, AN EDGEWOOD PARENT, lost her last job because her son woke up one morning with an inflamed leg. Jakubac rushed him to a clinic and would have called her office to say she'd be late, except that she doesn't have a home phone (too expensive) and her cell-phone service had recently been cut off because she couldn't pay the bill. By the time she called from the doctor's office later that day, she'd been logged as a no-show, which compounded the numerous late arrivals already on her record because of chronic trouble with her car: it needed a new battery, but she couldn't afford one, so she often had to find a jump start first thing in the morning.

Living with a small financial margin



isn't just about not being able to afford things; it's also about not being able to get things done. A few times a year, the United Way of Central Maryland runs a poverty simulator in which middle-class participants are given a set of tasks, along with situational constraints like relying on family for child care, taking the bus and depending on the money from a teneager's after-school job. Some people grow so frustrated that they quit before the exercise is over.

Volatility also plays a major role in what might be called the chaos of poverty. Over the course of a year, 20% of families in the poorest fifth will see their incomes drop by at least half from one four-month period to the next, according to Urban Institute research. Poverty often goes hand in hand with shifting work schedules, child-care arrangements and transportation and living situations—all of which are taxing to manage and have a negative effect on children.

LOUISIANA BLUES

Dakeia Johnson, 30, and her daughter Jes Zahre, 4, on the porch of Dakeia's mother's house in New Orleans. The family lost their home during Katrina. Their replacement house had drywall that turnec out to be toxic; they now suffer from health problems that hav required hospitalization.

MYTH NO. 3: GETTING PEOPLE OUT

OF POOR NEIGHBORHOODS
IS THE ANSWER

MOVING TO OPPORTUNITY WAS ONE OF the greatest antipoverty experiments in U.S. history. Authorized by Congress in 1992, the 15-year randomized trial gave 4,600 low-income families in poor neighborhoods a chance to move to less distressed areas. It reflected a popular belief about the poor: that the issues of concentrated poverty, especially in cities, are so entrenched and complex that removing people from their environment-away from bad schools, high crime, a lack of affordable quality housing, drug markets and the breakdown of informal social control-is the best way to set them on a path to a middle-class life.

The results were, to put it mildly, mixed. Families who moved to less poor neighborhoods generally saw



improvements in mental health and feelings of safety but made few gains in income and employment. Kids did no better in school, and while girls tended to be better of socially, boys were more tilkely to show behavioral problems. One of the conclusions of Moving to Opportunity and similar programs has been that a neighborhood is largely the product of its residents' social connections, and while the networks of poor communities may at times hinder escape from poverty, they also often provide a key source of support.

The current approach is to change neighborhoods from within. The highest-profile effort is Harlem Children's Zone in New York City—a child-centric initiative that strives to reach a critical mass on neighborhood families through more than a dozen coordinated programs, from prenatal care to job training for teens and adults. A series of federal programs are now awarding competitive grants to calli-

HOOP DREAMS

Spirit Grass, 13, is part of a family of six in Thunder Butte, S.D., who until recently survived on \$3,500 a year. Both parents have worked part time in on-again, off again jobs. This fall me to the found work in a medical lab, but she worries about the money she spends or aga for her commute to work.

tions of local organizations doing similar neighborhood-based work, including in rural areas and on a Cheyenne reservation.

MYTH NO. 4: FOCUSING ON INDIVIDUAL IS THE KEY TO POVERTY

IT'S EASY TO FRAME POVERTY AS AN INDIvidual problem, but some of the highestpoverty pockets of the country are places that have been hit hardest by the collapse of decent-paying manufacturing jobs. To discount macroeconomic forces is to miss a big part of what drives U.S. poverty.

Since 1980, worker productivity has risen by 78% but full-time-worker pay, including fringe benefits, has grown by just half that. Less educated workers—those most prone to poverty—have fared the worst, according to MIT economist Frank Levy. Furthermore, while college-completion rates have grown

substantially over the past generation, those gains are concentrated among richer families, as research by the University of Michigan's Patrick Wightman and Sheldon Danziger illustrates. The increasing price of college is a factor, as is the fact that, for the poor, taking time off work to be a student is often not an option. But the education gap between kids from rich and poor families has not only been growing but starts even before kindergarten. A good school in every neighborhood is surely one of the most powerful antipoverty programs imaginable, but enriching preschool may need to be part of the equation too.

MYTH NO. 5: POVERTY IS INEVITABLE

IMAGINE A POLICY THAT COULD CUT THE U.S. poverty rate in half. Turns out we already have one: it's called Social Security. Between the late '50s and mid-'70s, the poverty rate dropped from 22% to 11%, mostly because of a decrease in the destitute elderly. In 2010, just 9% of Americans 65 and older were poor, the lowest rate for any age group. Last year, the earned-income tax credit, which boosts the pay of low-wage workers, lifted 5.4 million people, including 3 million children, out of poverty. Economists Yonatan Ben-Shalom, Robert Moffitt and John Karl Scholz calculate that programs like cash assistance, food stamps and unemployment and disability insurance reduce the rate of poverty and near poverty by 14 percentage points a year.

Of course, solutions come in forms other than government safety nets. In Baltimore, Toemore Knight, who has been homeless, is now an electrician apprentice in a program run by the nonprofit Job Opportunities Task Force. Employers play a major role, both guiding the curriculum and providing paid on the job training, a "learn and earn" setup that acknowledges the infeasibility of asking cash-strapped people to front money for education, Crucially, the program also helps participants tackle other issues that reinforce poverty, like the difficulty of landing a job with a prison record and the expense of transportation. Through a partner program, Vehicles for Change, Knight is buying a used truck so that he can get to work.



MAKING A GO OF IT IN FRESNO

Taylor, 3. Before having her baby in August, Menguista was a home service aide to the elderly. Until she goes back to work, she and her fiancé, who does auto detailing part time while training to be a medical assistant, reciver soon a month in food stames.



UNDERSTANDING WHAT POVERTY IS IN reality-and not in myth-is crucial to any new effort to lift Americans out of it. Poverty is daunting in its complexity; it is geographically disperse, chaotic and tied to the dynamics of both a single neighborhood and the national economy. But it is surmountable. In practice, combatting it might mean opening health clinics in suburbs, restructuring college financial aid to let people enroll in just one class a semester (so it's easier for them to hold down jobs) and using the earned-income tax credit to supple ment the pay of all adult low-wage workers, not just those with children. It might mean developing programs to help the poor smooth their income as well as build assets and to bolster the positive social capital that already exists in poor neighborhoods. It means paying attention to the barriers poor people actually face, and not the ones richer classes as sume they do.

It may also mean being prepared to think locally. The research outfit MDRC has spent decades evaluating dozens of antipoverty programs, and as its president, Gordon Berlin, asys, "We're seeing a growing body of evidence that the things that work tend to be small in scale." Whether or not a particular approach is a success often has as much to do with watchful implementation as it does a brilliant theory of change.

That doesn't mean there shouldn't be national funding or a national strategy. But the fact that there is no one archetype of the American poor means it's difficult to create a blanket policy to help them. For some, the answer is a better-paying job. For others, it's detox. For the elderly, for the disabled, for the unemployed, it's good old fashlond social insurance.

Whatever the solution, the ambitions of the people below the line are a crucial part of it. At the Edgewood Boys & Girls Club, Sabrina Root, a divorce dental assistant who serves part time in the Army Reserve and takes communitycollege classes, talks about the dream of finding a career that would enable her to earn enough money to take her son to Disney World. "But I don't want people to feel sorry for me," she says. "It's not about where you come from, it's about where you're going."

A Flicker of

0

Filipov, a handsome and energetic manager at a refrigeration factory in Pazardzhik, Bulgaria, decided to change a burned-out lamp in his garden. His daughter Anna refers to what happened next as "my father's ridiculous accident." Filipov lost his balance on the 3-ft. (0.9 m) stepladder and fell, hitting his head on the pavement. The blow put him in a coma for five days. When he opened his eyes, doctors determined that the damage he sustained had left him in a vegetative state, a condition defined by unresponsive wakefulness, in which patients follow a normal sleep-wake cycle, breathe without assistance and make reflexive movements such as swallowing. yawning, grunting and fidgeting but have

ON SUNDAY, AUG. 9, 2009, VALENTINE

Conscious A vegetative state is a life sentence. New research on the minimally conscious may help commute it BY EBEN HARRELL/LIEGE



Window into the soul Valentine Filipov's eyes follow a mirror during a test doctors used to confirm he has retained some level of consciousness

no awareness of their environment and can't respond to commands.

After Filipov spent a month in the hospital, the doctors discharged him. They told his family there was nothing more they could do, that he would be in a vegetative state for the rest of his life.

But Filipov, who was then 4,5 seemed less lost to the world than the doctors assumed. He would sometimes laugh with family members. He would sometimes cry with them—especially with 50 fig., a his wife of 23 years. Vegetative patients have been known to cry, but their outbursts are typically spontaneous and not associated with external stimuli. Filipov's seemed triggered by things going on around him.

Desperate for a reappraisal, his family took him to see Dr. Steven Laurys, head of the Coma Science Group at the University of Liège in Belgium, one of the few centers in the world that study vegetative patients. Laureys asked the Filiposo if they could make Valentine cry. They circled his bed, and Softya approached him. She bent over him, cradling his cheeks in her hands. "Will you cry with me, my love?" she whis-pered. "Will you cry with me, my love?" she whis-live him with the world with the world with the world with the pered. "Hill you weep with me, my dear?" His face began to contort. His eyes fixed on his wife's face. He started crying, loudly.

The Consciousness Conundrum

THERE'S AN ODD CIRCULARITY TO STUDIES of consciousness-a curious exercise in the brain investigating the brain. Nobel laureate Francis Crick took a reductionist view of things in the 1970s, coining the term "the astonishing hypothesis": the idea that all feelings, thoughts and actions are just the products of a mass of brain tissue and that we all exist only one well-placed head trauma away from the irrevocable erasure of the self. Most people choose to see things more lyrically; consciousness is the ineffable ghost in the machine that distinguishes us from plants and bacteria and perhaps even other animals—the quality that makes us wondrously special. But scientists aren't lyricists, and Crick's mechanistic view has prevailed, with scientists treating the brain as merely another organ, albeit a highly complex one.

Nowhere is that complexity more evoluted than in our understanding of how consciousness works—and fails to work. Minor accidents like Filipov's can lay waste to cognitive processes. Major traumas like the shooting wounds of Congresswoman Gabrielle Giffords can

leave remarkable room for recovery. Patients labeled vegetative typically stay that way—but sometimes they don't. So where's the line between resignation and hope? Various studies in the past decade, including one by Belgian and U.S. experts in 2009, have found that about 40% of patients diagnosed as vegetative are actually conscious and fall into a category adopted in 2002 called minimally conscious, a state in which some awareness exists and improvement is possible.

In the Nov. roissue of the medical jour nall the Lancet, a research team that included Laureys illustrated this point starkly. They studied 16 patients diagnosed as vegetative, hooking them up to an electroencephalogram (EEC) and asking them to magine squeezing their right hand and wiggling their toes on command. Three of the subjects apparently imagined it well, with the proper EEC tracings apparaing in the premotor cortex of their brain. Did they hea? Were they conscious?

Those are terrifying questions. Patients wrongly diagnosed as vegetative are sentenced to a life of being tended to by caregivers (who may never take the trouble to engage them because it seems pointless) even as a partly functioning mind weeps or dreams or rages within. "The notion of a conscious person treated as not conscious-to me that's the ultimate portrait of isolation," says Dr. Joseph Fins, chief of medical ethics at Weill Cornell Medical College in New York City. "It's solitary confinement of the most troubling kind." The Lancet study and others suggest that with the right technologies and therapies, at least some of these confined minds may conceivably be set free.

A Look in the Mirror

EACH YEAR IN THE U.S. AT LEAST 14,000 victims of brain damage are diagnosed as vegetative. If the 40% misdiagnosis figure is correct, that means 5,600 of them are in better shape—perhaps far better—than their records show.

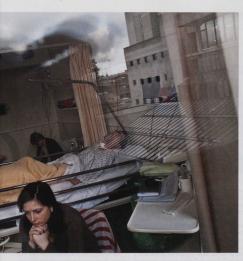
There are a lot of reasons the error rate is so high, not least that ruly reliable tests for consciousness have not been developed. To date, the only accepted disposition mostic method remains a bedside exam. Clinicians ask patients to respond to commands like "Squeeze my hand" and "Look at the ball." But many postcoma patients suffer from aphasia, the inability to understand language. Brain damage



may leave other patients deaf or blind or so severely spastic, epileptic or paralyzed that they cannot control their movements. They may be severely amnesiac and unable to remember what is asked of them. They may suffer from akinetic mutism, in which the part of the brain responsible for decisionmaking and drive is damaged.

What's more, minimally conscious patients almost always suffer from fluctuating vigilance for them, consciousness flickers on and off like faulty Christmastree lights. "A doctor goes to the bedside, gives five commands, gets no response and offerent mean docen way with a total-different doctor might see the patient at a different different impression." says Joe Giacino, ogy at Boston's Spaulding Rehabilitation europsychology at Boston's Spaulding Rehabilitation heuropsychology at Boston's Spaulding Rehabilitation heuropsychology at Boston's Spaulding Rehabilitation heuropsychology at the defendent of the defendent of the work of the defendent of th





To improve diagnostic accuracy, Giacino designed a rigorous, standardized bedside assessment called the coma recovery scale—revised (CRS-R), which Laureys and others promote as the gold-standard seam. Some elements of the old method have been retained in the CRS-R, including object recognition, in which the examiner holds two objects and asks the patient to fixate on one. But the CRS-R requires each test to be repeated multiple times to allow for fluctuating vigilance.

The primary reason for the CRS-RS improved accuracy, however, is a simple but revolutionary innovation. The test measures patients' eyet-tracking ability by moving a mirror in front of their face rather than a finger or pen—the method most neurologists use. "Patients respond powerfully to their own image," Laureys explains. "Its "emarkable to witness."

Indeed, Filipov's awareness became indisputable as soon as a mirror was cir-

40%
SHARE OF PATIENTS
DIAGNOSED AS
VEGETATIVE WHO

The long wait Anna Filipova struggles with her father's uncertain prognosis culated in front of him. While he failed to respond to nearly every other test in the CRS-R, he became transfixed by his reflection and avidly followed it with his eyes. "If every doctor in every emergency room carried a mirror in their pocket, it would immediately and significantly reduce the misdiagnosis rate," Laureys savs.

insulagious rate, Laureys says. Even the most rigorous neurological exam cannot circumvent another diagnostic obstacle, though. Many vegetative patients do not emerge into minimal consciousness until several months after waking from a coma, by which time they waking from a coma, by which time they have been discharged from the hospital. "A family might tell a nurse in a care home that something's changed, but the nurse sees the vegetative label and dismisses this as wishful thinking," a tureyer says.

The irony—a cruel one—is that often doctors give up on recovery at the worst stage possible. The first few months after an injury can be a quiescent time for a damaged brain, with all its energy going to recovering from the wound it suffered. It's only later that it has the luxury to begin recovering some of its lost faculties.

"You want to change the world?" asks Nicholas Schiff, a neurologist at Weill Cornell Medical College who, along with Laureys and a Canadian research group, is in the middle of a three year project to study 500 patients with consciousness disorders. "Get these patients a six month follow up by experts who can do a behavoral assessment. Give them a safety net."

The Eye of the Scanner

WHILE BEHAVIORAL EXAMS REMAIN THE primary diagnostic tools for assessing consciousness, a handful of neurologists around the world are using brain scans to try to map what they call the neural correlates of consciousness, the cerebral mechanisms that make us aware. For years, doctors assumed that consciousness was a diffuse and global brain process. But studies of sleeping, anesthetized and vegetative brains have shown that it is instead localized in a network consisting of three discrete parts: a section of the prefrontal cortex; a section of the parietal cortex; and the thalamus, a structure deep in the brain that acts as a sort of traffic cop, mediating signals between the two other parts of the consciousness triad. Should connections among the three sections be severed-or should one be destroyed-consciousness ceases, "You don't need a lot of gray matter to be conscious. You only need the right parts of the brain to function together. That was a huge surprise," Laureys says.

With this knowledge, neurologists are getting better at developing imaging tests that can conclusively capture consciousness onscreen. Last year in the journal Neuroimage, Spanish neuroscientist Davinia Fernández-Espejo published a study of 25 patients with disorders of consciousness in which she used magnetic resonance imaging (MRI) to differentiate patients identified with the CRS-R as vegetative from the minimally conscious and achieved 95% accuracy. Similarly, Laureys' group has developed software that can interpret results of positron emission tomography (PET) scans, which measure metabolic activity in various regions of the brain. Last year the group published a study in Neuroimage in which the program was able to distinguish fully conscious patients from vegetative patients with 100% accuracy. And while the just-published EEG findings were not as dramatic, they showed that promising diagnoses can be made with simple, inexpensive hardware too.

A Rich Inner Life

WHAT SICH TESTS CAN'T ANSWER IS THE question that intrigues— and frightens—people most: What is life like for minimal y conscious patients? Is it silent agony, or is there a primal serenity to their muted interior world? The answer may depend on their quality of care. PET scans show that when minimally conscious patients are thought to be in pain, parts of the brain associated with emotion light up, just as in healthy volunteers. Vegetative patients show no such response. Yet, Laureys says, minimally conscious patients often don't receive basic pain medication, which he calls "very disturbing" given these results.

There are also tantalizing signs that minimally conscious patients may sometimes be capable of experiencing a rich inner life. A recent study by Laureys of sleeping minimally conscious patients showed brain waves associated with REM sleep, which suggests they could have dreams. In 2006, Laureys and Adrian Owen at Cambridge University published a study in Science in which they performed a functional MRI (MRI) scan on the brain of a 13 year-old woman diagnosed as veg-cative. When she was asked to imagine playing tennis, her brain activated supplementary motor areas in precisely the same



way as a healthy volunteer's. She also activated spatial brain networks associated with navigation when she was told to imagine walking around her home.

Kate Bainbridge, a former schoolteacher who was similarly misdiagnosed in the 1990s in England, has since recovered enough to communicate by using a computer. "It really scares me to think what might have happened to me had I not had the scans," she wrote in an e-mail to a journalist in 2007. "They show it was worth carrying on even though my body was unresponsive."

This year, Laureys further challenged presumptions of the quality of life for postcoma patients with a survey in the Paritish Medical Journal of locked-in patients. Such people sustain a brain injury that results in paralysis os severe they can control only their eye movement, even as their consciousness network remains intact. The journalist Jean-Dominique Bauby, perhaps the most famous such patient, earned fame through a memoir, The Dining Bell and the Butterfly, which he dictated by blinking.

In the immediate weeks after their injury, locked in patients show intense activity in a region of the brain associated with anxiety and emotion, but they eventually adjust. Laurey's survey of 168 locked-in patients found that while a minority—just 7%—reported life to be "miserable" and were lobbying to be euthanized, a vast majority said they were "happy" despit their condition. "That result showed that we should be very careful not to presume that we know the subjective experience of a noncommunicative patient," Laureys says. "That has profound implications for families and doctors considering whether to withdraw life sustaining tratment."

But those implications can cut two ways. Truly vegetative patients who remain awake but unresponsive for more than 12 months following traumatic brain injury or three months after cardiac arrest or stroke are classified as permanently vegetative. The U.S. Supreme Court ruled in 1990 that such patients may have their feeding tube withdrawn if they have a living will, if their legal proxy so desires or if there is strong evidence that the patient would want to die.

There is no known time limit, however, for when a minimally conscious patient might suddenly return to full awareness. In 2003, 39 year-old Terry Wallis of Arkansas emerged from minimal consciousness and regained fluent speech after lingering in a unursing home for 1 years after a car crash. Using diffusion tensor imaging, a novel brain-scanning technique that maps the intact internal cables in the brain, Schiff foundin 2006 that Wallis brain had undergone axonal sprouting. New connections had been made among existing neurons.



All families with a vegetative loved one imagine that he or she will be the next Wallis, though few are. So even with the dignity and perhaps comfort of the patient on the line—not to mention the welfare of the famility audlet—it can be agonizingly difficult to pull the plug. "The right to die is an important principle," Jaureys says. "But doctors must also be clear that we can't always give a certain prognosis."

Making things worse, even the best scanners are still just inferential machines. They reveal brain activity, and neurologists must decide if that suggests thoughts. In a healthy patient it typically does, and it's easy enough to confirm the premise; just ask the subject. There's no such proof possible with the minimally conscious. "Opening up a communication channel with these patients is the holy grail from an ethics point of view," explains Weill Cornell's Fins. "Right now the debate about what these patients feel is missing the one voice it needs most—that of the patient."

The Stirring of the Silent

THAT VOICE COULD SOON BE HEARD. LAST year Laureys and the Cambridge team reported using the methodology of the 2006 tennis study to show that some minimally conscious patients can use mental visualization within an fMRI to communicate. Laureys asked patients to imagine playing tennis if the answer to a question

19 YEARS

> TIME THAT AMERICAN TERRY WALLIS SPENT IN A MINIMALLY CONSCIOUS STATE BEFORE REGAINING SPEECH AND FULL

Vital signs

Dr. Steven Laureys, far left, searches for signs of consciousness on brain scans like the one administered by Caroline Schnakers, center was yes and to imagine navigating their home if the answer was no. One other wise unresponsive minimally conscious patient was able to answer five of six questions correctly. Many of the patients did not respond, and the paper is admittedly merely a proof of concept, since (MRIs are hardly affordable household appliances. But Laurey's Lancet study published this month shows that inexpensive EEGs could work too.

Other far less expensive techniques may also help patients make the most of their residual communication powers. Zolpidem, a popular sleeping pill, seems to make a minority of minimally conscious patients immediately more alert. Preliminary evidence suggests that amantadine, a Parkinson's drug, may be beneficial too. Many Parkinson's patients enjoy dramatic symptom reduction through deep brain stimulation (DBS), a surgical procedure in which a fine wire is threaded to the misfiring region in the brain and regulated through a cardiac-pacemaker-like device. This has also been shown to have potential benefits in some minimally conscious patients. Laurevs recommended that Filipov's family try to enroll him in a DBS trial after trying amantadine as well.

Before Laureys communicated this treatment plan to Filipov's family, he and a team of doctors, neuropsychologists and Ph.D. students crammed into a small meeting room in Liège to review the results of his tests. The group perent at large screen at the front of the room. The areas of Filipov's FET scan that showed functional activity glowed with a purple aurora reminiscent of distant galaxies. The rest was as gray as wet concrete. Laureys discussed what the scans suggested and then asked a far deeper, more important question. "What is it like to be Mr. Filipovo?"

No one in the room knew, of course. Nor could they say if Filipov himself knew. Eight months later, he has shown no improvement. But Sofiya, his wife, puts faith in the possibility that her husband's essence remains. And inside her head, in a way, it does. Each evening as she prepares him for bed—as she checks his tubes, cleans out his sores, pulls the covers over his shoulders—she says silently to herself, "Good night, my dear, my love, good night." She is working to keep two Valentines alive: the one lying before her, and the one working peacefully in the garden.

THE ANTI OPRAH

She insults her fans, and they love her for it. How Chelsea Handler turned her frank, vulgar comedy act into a media empire By Karl Taro Greenfeld

CHELSEA

HANDLER SAYS I MUST THICKEN MY SKIN. She tells me I am not going to make it in this business if I let people push me around, if I get upset easily when someone I've written about is angry with me. She saks repeatedly if I am listening to her.

"You are one of the worst journalists
I've ever met," she declares when I can't repeat back to her what she has just told me.

peat back to her what she has just told me.
We are sitting in a back booth in a Japanese restaurant in Brentwood, Calif., facing
each other over plates of sushi. Handler
picks off the fish and shuns the rice, explaining that for her it's become a choice

between carbohydrates and alcohol. She nibbles raw tuna and sips a grapefruit cosmopolitan. An angry woman, the subject of a story I wrote for another magazine, keeps calling and texting me.

"Let me deal with her," Handler says as she grabs my phone.

Handler, 36, has large ears, a high forehead, thin eyelashes, a slightly crooked nose and a long chin, all pleasingly fitted onto a narrow face beneath frosted hair with brown roots. She has broad shoulders and thick upper arms and says she is working on straightening her stature: "I was watching myself on the monitor during the show and noticed I have terrible posture. I'm slouching." She doesn't like her arms, she says, but she can't do anything about that. She already works out 90 minutes a day—the price, she explains, of being a celebrity. You have to look a certain way, she says. "But I'm not complaining about being a celebrity. My morn used to say, Don't complain about where you are; you're the one who got yourself here. And I would be like, Mom, I'm 10. You drove me to Hebrew school. You got me here!"

She drove herself to the restaurant this evening in her black Bentley from her Santa Monica studio, where she tapes Chelsea Lately, the top-rated cable



late-night talk show among women ages 18 to 34, and After Lately, the faux reality show that purportedly goes behind the scenes of Chelsea Lately into Handler's life. According to the Hollywood Reporter. she brought in \$40 million in ad revenue for E! in 2009. This month she agreed to a \$25 million deal with NBC that keeps Chelsea Lately on E! for the next three years. Those shows; her 4.1 million Twitter followers; her NBC sitcom, based on her best-selling memoir Are You There, Vodka? It's Me. Chelsea and scheduled to debut Jan. 11, in which she plays the role of her sister; her four consecutive New York Times No. 1 best-selling books; her appearance in the 2010 movie Hop; her upcoming roles in the films Mall, This Means War and Fun Size; her hosting of the 2010 MTV Video Music Awards and her sold-out 2011 26-city stand-up-comedy tour-her 2010 tour grossed \$16 million-constitute the various strands of the most powerful onewoman media brand this side of Oprah or maybe Rachael Ray. And watch out, Rachael, because Handler will be publishing a cookbook written by her brother Roy through her new book imprint.

She has become the 33rd most powerful woman in the world, according to Forbes magazine, by saying, repeatedly and without regard for who might be offended, whatever strikes her as funny or subversive. It's not that she's outspoken, it's that she seems to leave nothing unspoken. "Not much filter," says Roy. "She was always like that."

That is why, when texts keep arriving from my angry subject, I have to grab my phone from Handler to stop her from berating the caller.

"I get in trouble all the time," she tells me. "People threaten me, people demand apologies, entire cultures and races are mad at me. I don't buy into that. I just can't. I say what I want."

That willingness to discuss virtually anything onstage, in her books, on her television show—from her sexual fondness for midgets to her latest adventures in very personal grooming—has made her a national sensation. There have always been vulgar, explicit comedians, though rarely women, and never as successfully mainstream as Handler. She is, in a sense, the final iteration of decades of salty female comics, from Phyllis Diller to Joan Rivers to Kathy Griffin to Sarah Silverman, each of whom pushed the humor boundaries just as aggressively as her male peers but often with much less commercial success.

"You know you're a hot mess when the only "Stereotypes person buying you drinks all are funny for night is vourself." a reason. I went out with a guy who once told me I didn't need to drink to make myself more fun to be around. I told him, I'm drinking so that you're more fun to be around."

In comedy, timing is everything, and Handler was fortunate to emerge on the cultural scene concurrently with a national orgy of oversharing, when anything and everything is broadcast on blogs and social networks. She has become a symbol of our mania for compulsive and frank discussion of what in previous eras would have been divulged only to one's shrink or simply buried and left to fester in our deep, dark subconscious. But the bigger her empire gets, the more of a challenge it poses to her subversive and often alienating style of comedy. Being funny comes easy to Handler. Balancing her broad platform with her cutting and risqué humor-which often involves skewering her celebrity peers-might be a little harder. Handler rejects the notion that being in the Establishment may turn even the most subversive of voices a little hidebound. "My tone is never going to change-that's the essence. The moment you are asking, 'Is this responsible? Is this the right thing to say?' Then that means I'm in trouble.'

HANDLER GERW UP IN LIVINGSTON, N.I., the youngest of six children born to a lewish father, Seymour, and a Mormon mother, Ruth. From her books and her description of her childhood, Chelsea as all: tle girl comes across as Groucho Marx in a blond wig and hand-me-down Lee jeans—with a joint in hand instead of a cigar. At

age 9 she lied to her classmates, claiming to be co starring in a Goldie Hawn movie over the summer. At 12 she got herself hired to babysit kids two years her senior. That was the same year she stole her first pornographic videotape from her older brother and developed a serious crush on the family's plumber. "She always sought attention, not necessarily positive attention," says her sister Shoshanna, 41. "She gawe our parents a real run for their mone,"

Her siblings have a theory that it was the death at age 1 or their older brother. Chet, who fell while hiking in Wyoming, that transformed Chelsea into the extravert she is today. The family entered a period of intense grieving after Chet's passing. Her father obsessed over the accidental death, even instigating legal action against a friend of Chet's who had been hiking with him. "It consumed us," says Roy, "It transformed our family."

According to Shoshanna, Chelsea began acting out after that. "She was trying to get the attention she wasn't getting," she says. Chelsea agrees, adding that she was trying to lift her family's spirits. "Everyone was sinking. You want to elevate the mood. I was like, Everyone, look at me, look at me, Ifell down!"

Ruth died in 2005. Seymour is described by Chelsea as a "failed used-car salesman," and in her books and comments, she is not kind to him, casting



him as a "psychopath" and a "narcissist." But she does give her father credit for one brilliant investment he paid 425,000 for 10 acres (4 hectares) on Martha's Viryard in the early 1970s. Chelsea grew up land rich and cash poor. "We never had any money," she recalls. "We didn't have a car with working headlights, but we had this great summer house." Over the years, to pay for his brood's college tuttion, Seymour sold off bits and pieces of the family's estate. "My dad was lucky," Chelsea concedes. "Once!"

She graduated from an alternative high school and moved to Los Angeles when she was 10, staying with an aunt and uncle while she tried to break into show business. She soon realized that she wasn't going to make a splash in the industry as just another pretty face showing up to audition. "I was not getting my personality across," Handler says. "The other girls were skinnier and prettier than me. I needed to do something to separate myself." She set up a video recorder in her living room and taped herself telling jokes about her waitressing job. She sent the VHS tape to the Comedy Store in Hollywood and that weekend had a spot in the lineup.

From the beginning, Handler, who had won beauty pageants as a teenager, found it natural to go onstage in jeans, a ponytail and no makeup. She played down her looks, calculating that it would make her more relatable: "It's worked out that way, but most of the time, I don't feel that hot," she says. "I honestly don't care about that stuff." Brad Wallach, a writer for Chessa Lately who also performed stand-up on Handler's most recent tour, says, "I think she knows she's attractive, but that's never been part of her persona, and that helps make her seem more approachable."

That pretty but low-key manner, coupled with her brand of frank, sexual female humor-in some ways she follows in the footsteps of fellow Jewish-Mormon comic Roseanne Barr-quickly won over female fans. Her persona as the vodka-slurping, promiscuous bimbo who nicknamed her genitalia "the coslopus" somehow seemed to take the dark edges off the culture of hooking up-or at least made the rest of us feel a little better about whatever we might have been up to last Friday night. She began turning up in regular guest spots on E! and Oxygen, as a correspondent on NBC's The Tonight Show and as a regular on Oxygen's Girls Behaving Badly before landing her own E! show in 2006 and embarking on the first of several sold-out stand-up tours.

According to Handler, the key is that the persona is real. "I'm not pretending to be a character." she says of her act. "If I did, then people would smell it a mile away. You have to be whatever your authenticity is. You have to make that front and center so that everybody gets it. The people who are going to be turned off, they are long gone. The people who are drawn to me, well, they're loyal. It's like when people ask me, 'How do you date men after they've read your books?' and I'm like, 'Anyone who's read my books and still wants to date me, that's a keeper.''

HANDLER IS THE LAST TO BOARD HER private jet from LoS Angeles to Portland, Ore, where she will be headlining the Lies That Chekea Handler Told Me show at the Arlene Schnitzer Concert Hall on a late summer evening. "I want you to know, she tells me as she takes a rara-facing seat next to Heather McDonald, a comic who will be opening for her that night," usually roll bigger—G-IV, GV. This is a short flight, so only a Hawker."

Nootherfemale comedian rolls even this gis. Gince the success of her first book, she has toured in support of each subsequent volume, signing books before and after her set. She is unique among comedians in that she not only sells out 10,000 seaf houses, he also has products to hawke every ticket buyer becomes a multiple books buyer. "I can't think of a comedian who came this far this quickly," says Geof Wills, president of Live Nation Comedy, which handles her stand-up tours. "Maybe Dave Chappelle. But this has been very steep."

The 2010 four was an 80-show monster that Handler admits left her an emotional wreck. The latest four, just 26 dates and most of them on weekends, has been more manageable, also, it is structured so that Handler does just 45 minutes and is one of four comies. But she is clearly the one everyone is coming to see. Her audience remains largely ownen and gay men but with more and more ostensibly reluctant boyfriends turning up.

"She brought a whole new audience to stand-up—women 18 to 34," says McDonald. "She's the first successful female host on late night. More than 50% of the writers on her shows are female. That doesn't happen on any other show."

"I'm not trying to be a trailblazer with women on my show," Handler says. "To intentionally do anything is a put-off. If I were intentionally so ambitious or if I were always pushing some agenda, then I wouldn't be here. But I am for equality. I make fun of everyone the same."

When the plane touches down in Portland, a pair of black Escalades are waiting on the tarmac to take Handler to that night's venue. She sits behind the driver and, as we are driving over the Willamette River, asks, "What is Portland famous for?"
"Weed." someone says.

"It's beautiful, though."

In profile, with the trees of western Oregon passing behind her outside the Escalade window, she looks more Scandinavian than anything else, with stern, handsome features, Chanel sunglasses pushed up over brown roots, gold hoop earrings bouncing from lobes. She gets a text from her then boyfriend, the hotelier André Balazs, and studies her BlackBerry. She has written about and extensively discussed her romantic life; her willingness to riff on that is part of her rapport with her fans. She lived for years with Ted Harbert, former CEO of Comcast Entertainment and now chairman of NBC Broadcasting, before moving on to Animal Planet star Dave Salmoni and then a dalliance with the rapper and actor 50 Cent. She says she won't use Balazs in her books and stand-up routines as she has her other boyfriends, in part because he has children but also because she realizes that her power and success have changed the dynamics of her relationships. "It's just not fair-because of my platform, I can really hang someone out to dry. I can't just use him like that."

But if they were to break up?

"I'm never going to be the kind of person who is like, I'm not allowed to talk about that. But for me, now, this is a good kind of learning gauge: not talking about someone in my life."

They broke up in November.

HANDLER'S BOOKS DESCRIBE HER CHILDhood and womanhood in such unflinching detail that a reader goes from shocked to benumbed at how much is revealed and how graphic she is willing to be. She writes, with steady humor, about the whole range of female sexuality, from discovering at age 8 how to pleasure herself to acting on her fondness for African-American men. Her first book, My Horizontal Life, was published in 2005 when she was 30. Among other ribald episodes, she writes, "My relationship with my father had been on the proverbial fritz since the time I was fifteen and called the police to report him for child molesting." She goes on to say she made the episode up to get him out of the house so she could go to a party.

"If I wrote that book today," Handler says, "I couldn't write everything I wanted. I wasn't a big celebrity then—it was just a book, so nobody was like, Oh my



Chelsea, the Insult Comic Star Handler with her loyal companion Chunk, who goes with her to the office

God, she's going to talk about things that nobody famous would talk about."

The books may well be the most important part of her media empire. They make her tours far more lucrative than those of her fellow standups, and her audiences are much more personally invested. After the Portland show, a line of about 500 fans snakes up the stairs and out into the street. Autograph sectes are required buy books in order to get them signed most bring one or two and buy one or two—and Handler is obsessive about signing each and every book. The devotion of those fans, who spent \$50 on a ticket and are now waiting in line to spend a second or two with a woman they regard as their buddy—and who will probably insult them as they present their books—is the kind of loyalty a brand manager dreams of. Megan Hahn, 22, drove three hours from Seattle to meet Handler because, she says, "She's like your best friend, if you had a really funny best friend."

What is astonishing about watching Handler interact with her fans is that the more she insults them.—"You're a mess. Look at you. I can't believe they let you in" is a typical interaction—the more they seem to like her. She's not kind, but she's consistent.

"There's no difference between public Chelsea and private Chelsea," says Tom Brunelle, executive producer and head writer of Chelsea Lately and copresident of Handler's Borderline Amazing Productions. "What you see on TV, in the books, that's what she is. So there's no danger of her



they grow up and "lean out," she finds them less endearing. She is drawn to one of her nieces in particular: Seneca, a chubby little girl with a lisp, whom she likes to wrestle and cuddle. To bribe Seneca to allow her to roughhouse with her, Handler gives her little fun-size Snickers bars, which she also adores for their chunkiness. One evening, as they were playing their game, Seneca fell over, her sweat pants slipped down, and then Chelsea's sister-Seneca's motherwalked in. "Only I would get caught with a chocolate bar three inches from a child's rear." Only she doesn't say rear.

From where we are watching backstage, comedian Josh Wolf turns to me and says, "Only Chelsea could make that joke work."

HANDLER RECENTLY BOUGHT A HOUSE IN Bel Air, Calif., paying \$5 million in cash for a gated estate where she lives with her brother Roy and two lesbians who divide their time between Dallas and Los Angeles. (Handler likes a big, noisy household.) She's put a few million more into decorating and remodeling the house, and on a summer afternoon, she points out the hill atop which she will build her gym; the eaves of the house, which she will remove and replace with Brazilian ipe wood; the dining table made from planks recovered from the piers of Venice. She shows photos of new chairs she is considering for the den. It will cost many thousands of dollars to replace older, very beautiful chairs that also cost many thousands of dollars.

She shows them off with pride, drawing attention to the Botero sculpture, the Weems painting, the rain-forest showers, the custom-made Kyle Bunting cowhide rugs. This house, the private planes, the Bentley-these are the perquisites of her success, of course, in communicating with her audience of young women and then selling them, in various formats, her products. This luxury has become increasingly the norm for Handler. Like everything else in her life, she uses it as material: "I can't believe people know how much money I make. I'm not that kind of Jew. But then when I saw I was on the Forbes list, I was like, Maybe I am that kind of Jew."

Yet as we walk around her house-her dog Chunk, a half-German-shepherd, halfchow-chow rescue dog that Handler also brings to the office, loyally at her heels-it is clear just how far she has come from Livingston and from a 22-year-old wannabe starlet videotaping her own jokes. She is the Establishment now. She employs 250 people on her various staffs, is the decisionmaker in a media empire that generates millions for her parent companies and for her and lives in a mansion grander than those of the celebutantes Paris Hilton, Lindsay Lohan and Kim Kardashian, whom she mocks on her show. She now has, in other words, something to lose.

When I ask if she may be more careful now that she is one of the haves, she shrugs. "I don't think I'm more mellow now. Well, maybe I'm more mellow, but I'm also more high-strung. I'm never going to not talk about something because of who I am. I'm always going to be the aggressor. There are two things I won't talk about: ugly babies or people who are dying."

She adds that she will never show her genitalia in public. "If I do, then it will be by accident, I'm not a Kardashian,"

Before I leave, she asks me what happened with the woman who was so angry at me. I told her that the magazine, not this one, did correct a minor error in the story.

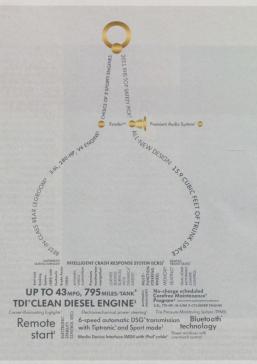
"See?" she says. "I told you. You're a terrible journalist."

She opens her front door to show me out. For a moment, she is uncharacteristically silent. And then, as if remembering her vow to continue to be an equalopportunity offender, she says, "Now go outside and lie down in my driveway like the dog that you are."

misstepping, of her fans turning on her." That long-term relationship with

her fans-it is easy to envision them aging with her as she goes through all of life's passages with her typical rigorous honesty-is what makes Handler's continued presence on late-night TV so potentially lucrative. She's eager to move past her current focus on pop culture into a broader format so she can take on politics and current events. She has ruled out moving to daytime-she's too risqué for the View crowd-and while she has been beating Conan O'Brien in audience share, she isn't sure she wants to adopt a more straightforward late-night format. "She's the first female who has made it in late night," says Brunelle. "So we have a lot of options."

That night in Portland, early in her set, Handler relates an anecdote about how she likes short, chunky children. As soon as





The all-new Volkswagen Passat. 2012 Motor Trend Car of the Year.

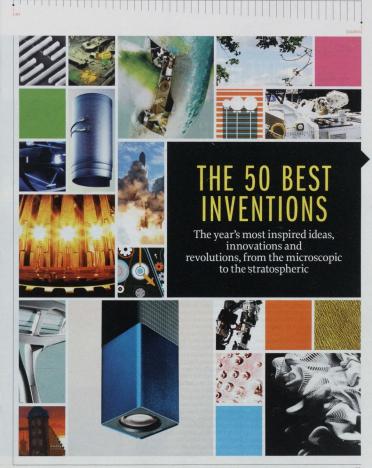
That's the Power of German Engineering.







3 Years or 36,000 Miles of No-Charge Scheduled Maintena



REINVENTING THE INVENTOR

In the age of Steve Jobs, it's all about perfecting the final product. Nobody remembers the guy who had the idea in the first place

BY LEV GROSSMAN

when you read the word inventor. (If Professor Jack Gallant of
Berkeley, Gallf, were here and
you were in his fMR imachine,
he could read your mind and tell you himself. But more of him ann, I'll tell you
what I think of a little guy with white
hair and a white lab coat from an old Disney cartoon. He's tinkering with an old
fashioned computer—you can tell it's a
computer because it has a lightbull sticking out of it. He looks like Christopher
Lloyd in Back to the Future.

Í think of either that or a sad sack in a plaid blazer who in the 1960s came up with a clever idea that some giant corporation took all the credit for—the guy in that movie about the guy who invented intermittent windshield wipers. I think Gree Kinnear played him.

used schmear played min.
It wasn't always like this. Inventors
used to be cool. They used to be towering,
romantic figures, rogue geniuses like Leonardo da Vinci and Benjamin Franklin and
Nikola Tesla, who called down lightning
and stole the holy fire of the gods. If there
had been movies back then, these men
would have been played by Taylor Lautner.
But all lith at has changed. Now they're not
even played by George Clooney. What

happened? How did inventors lose their divine aura? When did scientific innovation stop being sexy? I place the blame, reluctantly, on the late, great Steve Jobs.

That's to take nothing away from Jobs, a true genius who revolutionized at least four industries. But an inventor he was not. What Jobs did was perfect other peoples inventions. He optimized them. He had the will and the skill and the caliper eye to nail down the numbers to the farright decimal places. He buffed and polished other peoples ideas until they gleamed with the holy light of irresistible retail commodities, Jobs wasn't an idea man, he was a remix artisk.

Steve Wozniak: he was an inventor. Charles Thacker, Butler Lampson and Douglas Engelbart were inventors—they were the guys at Xerox PARC from whom Jobs borrowed much of the look and feel of the original Macintosh's revolutionary graphical user interface. But hardly anybody knows their names. What poor basted invented the first digital music player? Who invented the tablet computer? The smart phone? I don't know You don't know either. They were never on the cover of TIME. But we all know who came up with the iPod and the iPad and the iPhone. He's been on the cover eight times.





You don't want to romanticize inventors. Recent scholarship on innovation, such as Steven Johnson's Where Good Ideas Come From, suggests that most inventions are the result of slow-burning collaborative efforts hatched in academic labs and corporate R&CD departments rather than in some isolated genius's garage.

But somewhere in that creative scrum is somebody-or several somebodies-who's thinking really different. When Jobs looked at a smart phone, what he saw was a better smart phone, and that's all well and good. But you have to think truly different(ly) to look at sour milk and see a new textile. which is what the German biologist and fashion designer Anke Domaske did. Or to use electricity to put out fires rather than start them, as Harvard researcher Ludovico Cademartiri does. What if you could refocus a picture after you took it? Lytro's Light Field camera can. What if you could use an fMRI machine to capture a picture straight from someone's imagination? It's been done. Gallant did it.

Who looks at an ordinary lightbulb and sees a wireless data transmitter that could replace wi-fi? Who looks at a giant incinerator and sees an even more giant ski slope? Those aren't ordinary thoughts. They're not even different-they're downright welrd, lob's genius lay in figuring out how to make things actually do what they were supposed to do, but inventors do something else. They make things do what they're not supposed to do—what's not even supposed to be possible.

We live in an age when inventors are cheap. They're a necessary evil. a manufacturing by-product to be discarded as soon as their patents are safely in the hands of the optimizers. But let's take a second to remember how much we need them. A lot of the things you'll see in this feature aren't pretty; it's a rough draft of the future, unoptimized. One day someone like Jobs will take it as raw material to be tamed and refined and turned into something that will change the world. But not yet. This is the uncut, unprocessed ore of invention, straight from the idea guys, who got it straight from the gods themselves.

WHO REALLY INVENTED IT?

THE DIGITAL MUSIC PLAYER

In 1979 a British engineer named Kane Kramer demonstrated the IXI, a digital audio player. He wasn't able to turn it into a commercial product, but Apple has acknowledged the importance of Kramer's work.

THE SMART PHONE

Engineers at IBM developed the first smart phone, called Simon, which was demonstrated in 1992. Weighing in at 680 g, it had a touchscreen and could send e-mails and even faxes (I). Those were the days.

THE TABLET

In 1968 computing pioneer Alan Kay imagined the Dynabook, a remarkably iPad-like tabletstyle PC designed for children. (You can spot a similar device in Stanley Kubrick's 1968 film 2001.)

DIGITAL

In 1965 Charles Csuri, a painter and member of the art faculty at Ohio State, began using an IBM mainframe to morph and animate his drawings, including a widely exhibited film of a hummingbird.

THE COLD KILLER

LESS THAN 10 NANOMETERS (ONE MODIECULE) I We thought it couldn't be done, but scientists at MIT are developing a drug that may cure the common cold. It's called double-stranded RNA activated caspase oligomerizer, or DRACO, and it fights viruses as effectively as antibiotics fight bacteria. DRACO is a genetically engineered molecule designed to trigger suicide in cells that have been invaded by a virus. In lab tests, it was effective against 15 viruses, including rhinovirus, which causes colds: HIN-

NOT INCECT



influenza; dengue fever; and poliovirus.

NEECTED WITH RHINOVIRUS



THE 3-D CHIP



22 NANOMETERS | A technology revolution occurred this year, and almost nobody outside the high-tech world noticed. In May, Intel demonstrated what

it's calling a Tri-Gate transistor: a threedimensional transistor in which electrons flow not just in a flat channel but along three sides of a raised fin. Why should you care? Because next year, when Intel ships its first chips based on the new 3-D transistor, they'll perform about 37% better and use about half the power. Another victory for Moore's law.

STEM CELLS FROM FAT

12 MICRONS (ONE
CELL) What happens
CELL) What happens
to all the fat that gets
to all the fat that gets
bellies and thighs during
liposuction? Old answer:
It's thrown out. New
answer: It could be all
transformed into heart
and the country of the country
and the country of the country
transformed into heart
transformed i









THE MALARIA VACCINE

2 CEXTIMETERS (ONE VIAL) I One of the deadlisst diseases in the developing word, maintain kills about 780.000 people every year. But after 24 years of research, Joe Cohen, a scientist at Glaxo-SimthKiline, and his team have found an anisaria-vaccine candidate. RTS, 5—or more familiarly, Mosquirk—is still in its trial stages, but on far it's abowing great success. The Phasa 3 afficacy trial, or a first success the stage of the stag

THE ARTIFICIAL IFAF

2 CENTIMETERS | Enough sheer solar energy strikes the planet's surface every hour to power the world for an entire year, but little of that energy can be stored for later use. Nature found a way around that problem: the humble leaf converts solar energy into storable chemical energy through photosynthesis. So Daniel Nocea—a professor at the Massachusetts Institute of Technology (and a Time too honore) took a page from nature, developing an artificial leaf that turns sunlight into chemical fuel. The leaf—a thin silicon solar cell with cheap catalytic materials bonded on both sides—can split water into hydrogen and oxygen when exposed to sunlight, with the gases usable later to power a fuel cell.

ACTUAL LENGT



WHO'S YOUR FAVORITE INVENTOR?



MATT KEENNON
The Nano Air
Vehicle's project
manager
The inventor

who influenced me the most would

actually be Paul MacCready, who is one of the founders of AeroVironment, where I work, But that's not why I mention him. I've looked up to him since I was in junior high. I used to write school reports about his human-powered pedal plane [the Gossamer Condon Paul has a very intriguing mix of the practical and the academic When creating [the Condor], he took hang-glider and model-airplane technology and scaled it up rather than taking a large airplane and trying to scale it down. Plus, he's

not above making things out of aluminum tubing, bicycle chains and a lot of Scotch tape. 2 CENTIMETERS



BETTER BATTERIES

ACTUAL LENGTH

not much else can be used for both batteries and antidepressants—but it has an unfortunate habit of bursting into flames when exposed to oxygen, even in water. That's too bad, because a battery that could harness lithium in air or even water would provide mor energy than the standard lithium-ion battery found in your phone. That's exactly what Steve Visco and his colleagues at PolyPlus created: a working lithium-water battery, PolyPlus made a membrane that encloses the lithium, sealing it from the water—and preventing combustion—while still enabling an electrical charge The result is a battery that can last far longer than a conventional lithium-in or ell thium and conventional lithium-in or ell.

LASER

G CENTIMETERS IN DIAMETER | For Bayerische Motoren Werke, or as we know it, BMW, the headlights on its vehicles are as iconic as the checkered logo: they let you know, even from a distance, that it's a BMW. Now those headlights will last a lot longer. In September, BMW announced the development of headlights that use lasers instead of the current LED bulbs. The lasers consume about half as much energy as LEDs, and they'll be converted to make them safe and less intense than a laser pointer. They'll create a very bright, very white light that's pleasant to the eye and guaranteed



IE NEXT

10 CENTIMETERS | Here's the situation: our 5 billion mobile phones transmit 6 petabytes of data every month, That's 6 with 17 zeros. We're running out of the radio frequencies that are used for wi-fi and cellular networks. Enter Dr. Harald Haas of the University of Edinburgh, inventor of li-fi. Like many other great inventors, Haas developed a solution using things we have in abundance: chiefly the world's 14 billion lightbulbs. His system implants electronics in ordinary lightbulbs and uses subtle changes in light intensity to transmit data. It's fast, and since light doesn't go through walls, it's secure. What could possibly be more illuminating?



THE POSSESSED-HAND

10 CENTIMETERS | A joint project of the University of Tokyo and Sory Computer Science Laboratories, the PossessedHand is an amband with Ze electrodes that send electricity through your joints and muscles, producing precise, involuntary finger movements. Essentially, it controls your hand. In theory it could make you play the guitar, or touch-type, or do whatever it set will desires.

HAPPY BIRTHDAY!

2011 was a milestone year for some inventions that have reshaped our world, for better or worse

> 10 BITTORRENT

20

30 THE IBM PC

100
PROCESSED CHEESI
EGG CARTONS,
THE ERECTOR SET

150 THE GATLING GUN



VIRTUAL TEXTURES



10 CENTIMETERS (THE SIZE OF A TYPICAL TOUCHSCREEN) | Finish company Senseg's E-Sense technology enables users to not just touch pictures on screens but actually feel them.
Titcels—or tactile pixels—simulate a host of textures, from dry and wet to rough and smooth, using electrical fields and vibrations. Theoretically, the interface could work on screens as small as a smart phone or as large as a movie screen.

MOST RELAXING SONG

11 CENTIMETERS (THE SIZE OF AN IPOD) | Could

this be the sleeping pill of the future? British ambient band Marconi Union has drummed up the world's most relaxing song: "Weightless" is 8 min. 10 sec. of aurab bliss, proved to reduce anxiety by 65% as the listener's body rhythm syncs with the song's. Son the listener's body rhythm syncs with the song's. Indeed, "Weightless" is someoline that scientists caution drivers not to listen to it while behind the wheel.



HE LIGHT FIELD CAMERA



11.2 CENTIMETERS | When Lytro's tiny rectangular Light Field camera takes a picture, its sensors capture the entire light field, recording each ray of light's color, luminosity (intensity) and vector direction. In layman's terms, it means that nothing is ever out of focus. There's also no shutter delay, so photos are taken instantly. But here's the truly cool part: the camera uses a series of algorithms to let users refocus a picture after it's taken. You can choose to bring different objects at different distances into and out of focus, long after the moment you captured has passed.

11.2 CENTIMETERS



THE SWITCH60 LIGHTBULB 11.2 CENTIMETERS I In the U.S. the traditional incandescent lightbulb will be effectively outlawed by 2014. Right now, many fluorescent alternatives contain poisonous materials and give off harsh white light, and they are largely unpopular with the American public. So the race is on to create an energy efficient builb that gives off the familiar warm glow we've come to love. Switch Lighting may have an answer. Its 60- and 75-watt-equivalent lightbulbs contain LEDs that give off yellow light and (unlike fluorescents) can be used with dimmer switches. Switch bulbs cost about \$20 but use a small fraction of the energy that incandescents do (for example, the 60-watt-equivalent bulb uses only 1.5 watts) and have a life span of 25-000 hours, or 20 years. The bulbs are due to be released in early 2012.

The perfect gift is a tablet,



GETA\$50

Card that can be used to make other AT&T purchases.





Limited 4G LIE availability in select markets. 4G speeds delivered by LTE, or HSPA+ with enhanced backhaul, where available. Deployment ongoing. Compatible device and data plan required. LTE is a trademark of ETSL Learn more at art. com/network. Private Label AT&T Promotion Card ("Card") requires purchase of qualifying tablet with 2-yr agreement and min tablet data plan, or purchase at no commit price. Card may only be used toward purchases at ATAT owned retail stores, at att.com, or to pay your wireless bill. Card is not redeemable for cash and may not be used for cash withdrawal at cash-dispensing locations or automated gas pumps. Allow 60 days for fulfillment. Card funds are available for 150 days after issuance, through the "Expiration Date" shown on the card. Card requests must be postmarked by [02/06/12]. Other terms and conditions apply, Screen images simulated.



THE DIGITAL ASSISTANT

11.4 CENTIMETERS | This is Sirl. You may have met. Sirl is the latest feature on Apple's IPhone 4S and the intelligent personal assistant you've always warefa. Ask Sirl to send a text message or find the best burger to pick up your laundry on your way home, to pick up your laundry on your way home, the can also remind you to pick up you haundry on your way home, the worker of the your way have you to use special words and without a learning curve. And Sirl is still in beta, which means she should keep getting better.

THE INVISIBILITY CLOAK

12 CENTIMETERS | No, that's not really a lake in the middle of a desert; it's the mirage effect. Nanotech scientist Ali Aliev re-created the effect using 350-micrometer carbon nanotubes arranged in a sheet of what appear to be tiny threads. Spike the sheet's temperature to more than 2200°C and the dissipating heat bends the surrounding air and light waves, making any objects behind the sheet appear invisible. But Aliev's experiment works best underwater, so don't expect to see this in the halls of Hogwarts anytime soon.



WHO'S YOUR FAVORITE INVENTOR?



HARALD HAAS Inventor of

I believe it is

William Shockley.

Walter Brattain and John Bardeen on semiconductors and their discovery of the transistor effect The transistor made it possible to have modern communications technology transportation technology, medical technology and much more. The transistor has enabled us to explore the moon and Mars, It has enabled us to understand the human genome and helped extend life tremendously in the past 50 years, as well as brought us globalization. And yes, it also made the li-fi

system possible.

THE BUILT-IN BREATHALYZER



13.97 CENTIMETERS | Nearly 9,000 deaths in the U.S. could be prevented each year if alcoholdetection devices were used in all vehicles, according to the Insurance Institute for Highway Safety. Which is why QinetiQ North America, a research and

development facility in Waltham, Mass., is working with the National Highway Traffic Safety Administration and the auto industry to develop touch and breath-based sensors that could be strategically placed on steering wheels and ignition push buttons to instantly measure drivers blood alcohol concentration. The sensors would automatically analyze a driver's breath or skin to determine whether or not he or she was fit to drive. If the blood alcohol level was at or above the legal limit of 0.08%, the car would start... but not move. The devices are in testing now and will be embedded into a research whether by the end of 2013. If all goes as planned, they could be on the road in eight to 10 wears.



THE PERFECT RAZOR

14.3 CENTIMETERS | With an iridium handle, pure platinum screws and white sapphire blades, Zafirro's new razors ounds more like a Tiffany accessory than a bathroom gadget. But its form serve: ist function: to provide customers with a close shave and a very durable shaving device. Iridium is one of the strongest, densest materials in existence, and the company claims that each hypoallergenic and corrosion resistant blade is 5,000 times thinner than the human hair it's designed to cut. The razor, which costs \$100,000, comes with free cleaning and resharpening services for 20 years. That's about \$90,000 more than you'd spend on disposable razors in that time, but if the exorbitant price doesn't keep sales down, the quantity produced will: only 99 of the revers have been sucked.



THE NEXT-GEN PEN

15.4 CENTIMETERS | The inkling pen automatically remembers whatevery you draw with to any kind of paper. Using ultrasonic and infrared technologies, the pen captures your sketch line by line, storing it on a receiver you place on your piece of paper. When you connect the receiver to a computer's au 1SS cable, it transfers those images as files, and voilst Your receivand sketch is a digital image. The gestion of the receivant set of the signature of the property of the pental penta



THE SURVEILLANCE HUMMINGBIRD

16.5 CENTIMETERS (WINGSPAN) | A team of engineers led by Matt Keennon at California-based AeroVironment has developed the Nano Air Vehicle (NAV), a tiny, two-winged surveillance prototype for the Defense Advanced Research Projects Agency. Designed to mimic a hummingbird's flight, the NAV can fly up to 17.7 km/h in all directions, even backward. It can hover and rotate clockwise and counterclockwise. The \$4 million aircraft is remote-controlled and weighs 18.7 g, less than one AA battery (but more than most real hummingbirds). It's also equipped with a video camera. Because it's so small, the NAV can go where humans can't: it can spy, scout out safe spots in combat zones, hunt for survivors after a building collapse or an earthquake and even locate a chemical spill. Who knew the canary in the coal mine would turn out to be a hummingbird?



MIND-READING SOFTWARE

16.7 CENTIMETERS (LENGTH OF A HUMAN BRAIN) | What if I couldn't just guess but could actually see University of California, Berkeley, have developed a system that uses fMRI (a specialized MRI awake and even what we see in our dreams. In watched random clips les, and the system brain activity through a tive modeling. The images from the subjects similarities to the ones they were watching. The fMRI technology has been around for about breakthrough came in a smaller form, "The real invention was entirely Jack Gallant tells TIME model the brain, which allows one to build a much better brain done in the past."



SMART CAT EARS

20 CENTIMETERS | If you're not one to wear your heart on your sleeve, now you can at least express yourself with fake ears. The Japanese company Neurowear has developed neconimi, a cat-eared headband that's powered by brain waves. The ears wen't you're excited or concentrating and drop during relaxed states. And if you're concentrating and relaxing at the same time, the ears perk up and wiggle. Scheduled for release at the end of this year, the necomimic cat ears are part of a line of fashion gadgests by Neurowear that are designed to respond to biosensors.

ь. 2005

THE EDIBLE CAMPFIRE

30 CENTIMETERS (ONE DINNER PLATE) | Every three months, Grant Achatz throws out the menu of his Chicago restaurant Next and begins anew. This time around, he decided to take diners back to childhood, crafting a menu with the treats Midwestern youth. Capping the meal is what Achatz calls an edible campfire-a dessert based on sweet-potato pie. The campfire's burning logs are made by cooking sweet potatoes in sugary syrup and blue corn, which gives them their blackened look. Then a concoction of alcohol, vanilla and cinnamon is dusted over the logs and set ablaze. When the fire goes out, Achatz says, the logs taste like the outside



of a burned marshmallow

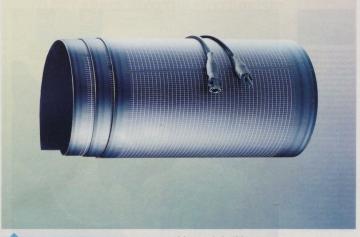


DE-INVENTED FACEBOOK ZUNE This year welcomed PLACES a lot of great new ideas THE FLIP GOOGLE VIDEO but it also saw some BUZZ old ones pass into obsolescence. They'll ь. 2010 ь. 2006 them anyway GUITAR THE **NASA'S UPPER** THE SPACE HERO WINDOWS ATMOSPHERE SHUTTLE START RESEARCH MENU SATELLITE

h 1995

b. 1981

ь. 1991



THE SOLAR ROLL-UP



34.4 CENTIMETERS | Solar energy is plentitul—unless you live in, say, Seatlle. But it's also "very diffuse, which means you need a lot of solar panels to collect usable amounts of energy and a place to put them. That's what makes the flexible thin film solar panels from Colorado-based Ascent Solar so ingenious Standard solar panels are rigid and need to be mounted on angled arrays, limiting where they can be deployed. But the Ascent thin film panel—which rolls and unrolls like a carpet—can be integrated directly into building materials. A roof ora wall of an office building could be made entirely of solar cells, sooking in all the power of the sun.



TWITTER-BASED HEDGE FUNDS

48 CENTIMETERS (LENGTH OF 140 CHARACTERS). The stock march is moody, 50 is Twitter, Harness the emotions flowing through both and you could beat the market, Indiana University professor Johan Bolien found that Twitter's collective mood predicted a market shift three days in advance. Lendon heigh find Derwent properties of the state of the st









THE DIGITAL DRUM

70 CENTMETERS J UNICEPS Digital Drum is designed to help rural communities in Uganda that have difficiently getting information about health, education and other issues. These solar-powered computer kiosks, which come loaded with educational content, are made of locally available metal oil drums and built to be durable against the elements. The first Digital Drum was installed in Marchat at youth center in the northern Ugandan city of Gulu, and UNICEF plans to deliver the devices to all barts of the nation.

CTUAL LENGTH X 14



THE FIRE-XTINGUISHER WAND

7.0 CENTIMETERS I Enflame extragaload Thought it is been described as a magic wand, the integral part of this device is an electrode designed to weaken and even eliminate farmes. Yet does not do magic, "any Ludows." Or Cademartin of Harvard's Whitesides Research Group, its developer. It does, however, create an electric field, which produces a flow of charging particles with the damage caused not only by a fire that so by the water used to extinguish but also by the water used to extinguish but.

WHAT KIND OF PEOPLE DOES IT TAKE TO GET APPLE INTO THE ENTERPRISE? PEOPLE WHO GET IT.



Every day, more and more people ask their IT departments for the latest Apple® products. And every day, CDW helps IT departments meet those requests.

Because CDW gets Apple. Over the past 15 years we've helped thousands of companies customize, configure, install and implement Apple products for just about every kind of network you can think of.

HERE ARE 10 WAYS WE CAN HELP MAKE APPLE PRODUCTS WORK IN YOUR ENTERPRISE:

1. Application Installation: We can install and customize most commercially available Mac® applications like MSOffice for Mac. Adobe® Creative Suite.

Casper Client and many others. And we can install custom in-house developed applications for iPad®.





- 3. Software Customization: Simplify software deployment by having CDW install and configure your operating system, software and applications.
- 4. Asset Management: We can label every piece of hardware with a unique asset number, which can be easily tracked online using your CDW.com account.

- 5. Broadband Activation: We can help facilitate seamless activation of your 3G-enabled devices on new lines of service prior to shipping.
- 6. Quality Assurance: Our three-step quality control process ensures fast and accurate deployment. Value-added services such as QC checklists and unique packaging can be completed to your specifications.
- 7. Personalization: CDW can custom laser etch your products for easy inventory management, and we can brand your organization's logo right onto the device for additional security.
- 8. Apple Authorized Service Provider: CDW is authorized to make after-factory upgrades and in-warranty and out-of-warranty repairs to Apple computers, and to facilitate the repair of iPad devices.



9. Lower Cost: Because CDW

handles the configuration, products arrive tested and working with minimal setup time. There's no downtime or need to hire outside consultants that add extra cost.

10. Faster: We can ship overnight for orders received before 1pm. Two-thirds of our orders ship the same day.

At every level of the corporate flow chart, from the C-suite on down, people are choosing Apple's breakthrough products. CDW can help your IT team get those products up and running faster.

FIND OUT HOW CDW CAN HELP YOUR COMPANY INTEGRATE APPLE PRODUCTS INTO YOUR ENTERPRISE AT CDW.COM/APPLEINTHEENTERPRISE





THE MAGIC

76 CENTIMETERS You're not crazy for talking to your mirror in the morning-especially if it's serving you the day's news. The New York Times Co. Research & Development Lab invented a mirror that uses Microsoft's Kinect motion sensor to recognize and interact with you. Step up to the mirror and it reflects who you are; beside your visage you'll see your health history and daily agenda. This magic mirror can do everything your morning routine requires: serve you news, tell you about the weather and rattle off your calendar. Put your morning medication on the sill and it will give you dosage details. It can even alert your doctor when you need a refill. Just don't ask this mirror who's the fairest of them all. Its camera might scan your outfit and offer you a better choice of tie.





NASA'S TWIN LUNAR PROBES

76 CRITIMETERS | It's easy to map the lunar surface; even with the naked eye, you can tell peaks from plains. The inside is tougher. That's a shame, because the moon's interior is an intriguing mix of lumps within lumps—areas of varying density and gravity. But a pair of NASA probes launched together on Sept. 10 will soon get a peek inside. As the ships, dubbed GRAIL (for Gravity Recovery and Interior Laboratory), orbit the moon, they will keep a fixed space between them. When they fly over a high-density area, they will get a gravity jolt—like a car hitting a speed bump. This will cause the gap between them to change by about the size of a red blood cell. Instruments will record all these flutters, providing what will amount to a full body scan of the lunar interior—mo Xrays needed.

WHO'S YOUR FAVORITE INVENTOR?

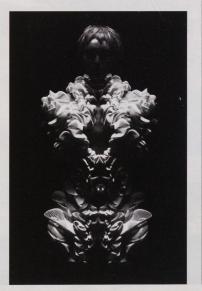


GRANT ACHATZ Inventor of the edible campfire

My favorite **Martin Kastner** of Crucial Detail. Martin is the designer of the service wear used at my restaurants. Alinea, Aviary and Next, I feel that Martin can be confronted with any idea, no matter how elaborate, and that is conducive to the project at hand. His ideas and his execution of these ideas have allowed me to be more experimental and progressive with my approach

THE 3-D-PRINTED DRESS

9.2 EXTIMETERS | Combining design with technology, Dutch countrier I ris Van Herpen's fantastical dresses are initially planned in Photoshop. She then works with an architect to develop a 3-D model, which is printed onto a polymer over the course of a week, resulting in a ready-to-wear dress that is an exact replica of the original sketched version. Van Herpen—who recently designed the dress Björk wears on the cover of her new album, Biophilia—presented her printed dresses during Paris Haute Country Esphion Week this Bunary.







THE INFINITE GAME

1 METER (ONE SIDE OF ONE BLOCK) | Plenty of video games allow you to build things. In Farmville you plant crops. The Sims lets you make bables. In Minecraft, a video game designed by Swedish developer Markus Persson, players can build a whole world made of 1-cubic-meter blocks, creating a low-res, retrolooking virtual universe. People have noticed: 16.1 million have registered to try it, and more than 4 million have purchased Minecraft. When the Smithsonian Museum opens its exhibit "The Art of Video Games" in March 2012, Minecraft will be one of 80 games featured.

THE SOCCER BOT

1.5 METERS | Last summer, the U.S. toam fell just short in its bid to win the women's World Cup it id don't have the same problem at #80cOup 2011. Extends invention of the same problem at #80cOup 2011. Extends invention of the same problem at #80cOup 2011. The same problem at #80cOup 2011. The same problem at #80cOup 2011. The same problem at 80cOup 2011. The same problem at 100 England at 100



HOLOGRAPHIC MAP

1.83 METERS | The Urban Photonic Sandtable Display is a holographic map that shows buildings and terrain in full color and three glorious dimensions—no goofy glasses required. After the real-world landscape is swept by unobtrusive lasers, software created by Zebra Imaging renders the map, and then a set of lenses displays buildings and land features to heights of up to 30 cm. Commissioned by the Defense Advanced Research Projects Agency, the Sandtable will, among other things, make possible better strategic planning and fewer surprises on the battlefield.



FOCUSED ULTRASOUND

2.5 METERS | Magneticresonance-imaging (MRI) and ultrasound technologies are each remarkable in their own right, but combine them and you get something life-changing. A technique called focused ultrasound uses MRI pictures to guide multiple beams of acoustic energy into a concentrated hot spot deep inside the body to heat and melt away tumors or other growths like uterine fibroids. A version of the device is being tested to tweak brain regions to relie pain and even the tremors associated with Parkinson's.

WHO'S YOUR FAVORITE INVENTOR?



IRIS VAN HERPEN Designer of 3-D-printed dresses

My favorite

Christiaan Huygens because of his valuable contribution to astronomy and also because he was the inventor and writer of early science fiction. The combination of his genius knowledge together with his rich

fantasy made him very unique. My

coming collection uses the microscope, based on his inventions.

NONUPLE VISION

2.13 METERS 1 Photo collages are a hallmark of British artis David Hockney's courve. But his latest addition, titled May 12th 2011 Rudston to Kilhum Root 5PM, invites viewers to see more than still plant The installation comprises 18 screens showing high definition pictures taken by an array of nine cameras set at different angles and exposures on a stretch of land between two streets in East Yorkshire, England. The subject is largely static, but the cause the pictures switch to the same angle at different points in time; the effect is that of sea attacked.



1.83 METERS



THE NEW MARS ROVER 3 METERS | NASA's newest Mars rover, Curiosity, is twice as long as any previous rover and weighs nearly 900 kg. That's a good thing, because when it lands on the Red Planet (Curiosity is scheduled for an August 2012 touchdown), it will have to explore the Gale Crater, which covers an area the size of Rhode Island and Connecticut combined and has peaks taller than Washington's Mount Rainier. Curiosity's on obnoral instruments include two that ingest and analyze rock and powder samples collected by the rover's two arms. It's all powered by a radio-sistone senerator that these radioactive deepart to mother best and electricity.

....



3.48 METERS | There was a lot of hullabaloo this year about the Dreamliner, the engine—the PurePower is able to pair a big, slow, quiet fan with a fast,

5.06 METERS | Electric cars are undoubtedly good for the earth. but are they any good to drive? Too often the answer has been no, but the souped-up Fisker Karma is a scorching exception. Developed by Henrik Fisker, the Danish automobile designer behind iconic sports cars like the all-electric range of 80 km. But its greenness aside. the Karma is also an unabashed luxury product, with sustainably sourced wood trim, a high-tech paint job, solar panels built into that can go from 0 to 60 m.p.h. in 6.3 seconds. (Unlike the equally zippy electric Tesla Roadster, the Karma also has a gas engine that extends the driving range by 400 km.) It's not surprising that green celebrities like Leonardo DiCaprio already have Karmas in their driveways.

THE WORST INVENTIONS

Some of this year's inventions were a step backward, not forward

THE FAKE APPLE STORE Meticulous, unauthorized repro ductions of Apple stores-22 were

found in Kunming, China, alone FLOATING NUCLEAR REACTORS A Russian firm built a nuclear plant

on a barge. What could go wrong? THE PLANETARY SIGNATURE

An Abu Dhabi oil sheik wrote his name on an Island in kilometer-tall letters. Visible from space? Check

ARTIFICIAL MEAT MADE FROM PROCESSED SEWAGE Only in Japan

A CELL PHONE THAT KISSES YOU A German designer built one. A motorized sponge is involved

THE NOSE-MOUNTED TOUCHSCREEN STYLUS So you can use your iPhone hands-free. Or you could just ask Siri





WATSON

APPROXIMATELY 8 METERS 1" I, for one, welcome our new computer overlords." Those were the words of 74-time (pepardy): fampion Ken Jennings after IBMS Watson computing system dismantled him and another top Jeopardy! Jayer in a man-se, machine challenge last February. Though the publicity stunt may have secured Watson its notoriety, the computing system, which is the size of 10 refrigerators and performs 80 trillion operations per second, has higher aspirations. The machine is not simply Google version 2.0. Rather than gathering countless pieces of data, Watson aims to relay only one—the necessary one.

THE WORLD'S FASTEST

13.4 METERS | What will soon be the fastest car in the world isn't in NASCAR or Formula racing or even in a Fast and Furious movie. By 2013, the world's fastest car will be the Bloodhound SSC. The goal: 1,000 m.p.h.-nearly Mach 1.4 at sea level. The current record of 763 m.p.h. was set in 1997 by the Thrust SSC, driven by Andy Green, who is also slated to helm the Bloodhound. The Bloodhound has both an EJ200 jet engine and a hybrid Falcon rocket engine, the combined power of which will enable the 7-ton car to reach 1,000 m.p.h. in only 42 seconds. Project director Richard Noble is relying on contributions from corporate sponsors and individuals to



THE REMOTE CONTROL



15.5 METERS I Marines are sending unmanned helicopters to Afghanistan to test a safer eventy of the supply troops deep missible hestige terrifory. Will be capable of ferrying up to 3 tons of supplies. Human controllers will guide it from its main base to isolated to roward-operating bases. The goal: replacing relay exception of the supplies of the

WHO'S YOUR FAVORITE INVENTOR?



TODD RIDER
Inventor of
the cold-killing
drug

The inventor who was by far the most influential on me is fictional. When I was in elementary school, I discovered the old **Tom Swift Jr.** novels and

devoured their tales

of a science nerd who creates a fun new invention in each book—robots, rockets, nuclear thingamajigs and more. I knew immediately what I wanted to do, and I have spent my life ever since then basically trying to be Tom Swiff Jr.

Another huge influence on me was science-fair projects. I started with a homemade robot dog in ninth grade, and in 12th grade, I won the

and in 12th grade, I won the grand prize at the International Science and Engineering Fair or a new rocket design. I filed my first patent application when I was 17.

THE FLYING YACHT

46.2 METERS | By day, Frenchman Yelken Octuri (a pseudonym) is a cabin designer for the airplane manufacturer Airbus. But after office hours, he dreams even bigger, putting his design skills to use on morefuturistic projects. His flying vacht sports a luxe interior that would fit right in on the Mediterranean, but its exterior could have dreamed of. Its bullet shape allows it to glide equally well through sea and air, and its stark lines pay homage to Beijing's Bird's Nest stadium. The yacht's four sails tower 40 m above the water, folding down on command into the wings of an airplane with the power to propel the vessel out of the water and into the skies.







ARTIFICIAL CLOUDS

THE SIZE OF A JUMBO LET | The 2022 FIFM Word Dup is scheduled to be played in Quitar. It's hot in Qutar; sementarizes in the summer average more than 100°F. Engineers at Qutar inhoraristy have proposed a radical olution to the problem: huge artificial louds that would find to ver the doubt statistical providing shade. The clouds statistically providing shade. The clouds called with reliain and positioned used with reliain and positioned using the providing shade in the providing shade in the providing shade by remote-controlled, soler-powered mights. The Other Solution, only lightly less radical, would be to hold ne World Cup in the whiter that year.

THE BOEING 787 DREAMLINER

57 METERS (WINGSPAN) | The newest beast in the skies is all about efficiency, not capacity. Boeing's 787 Dreamliner lifted off in September after seven years in development. It wasn't designed to be the next big thing—it holds only 264 passengersbut instead to upgrade the way we fly. Environmentalists can admire its 50%-composite body, made of lightweight carbon-fiber plastic, which requires 20% less fuel, but flyers will feel the real changes. The more pliable body allows for higher cabin pressure, reducing altitude sickness. Larger windows mean that even middle-seat dwellers can gaze into the great beyond. Japanese air carrier ANA brought the first two Dreamliners into service this month, and Boeing has orders for 819 more.

THE 10,000-YEAR CLOCK

6.1 METERS | Conceived as a monument to long-term thinking, this enormous timepiece—brainchild of Inventor Danry Hillia and funded by Amazon CEO Jeff Bezos—will be 6.1 m tall and housed in a remote West Feass care. But primarily out of steel, titanium and cerramic ball bearings, the code will play a unique bearings, the code will play a unique bearings, the code will play a unique property of the property of th

THE SOLAR

63.4 METERS (WINGSPAN) |
The Solar Impulse alriplane has a wingspan only a meter shorter than that of a Booking 247, but than that of a Booking 247, but come of the solar properties of the solar pro



THE BAGUETTE VENDING MACHINE 73.2 METERS 1.20 BAGUETTES LAID END TO END) | Americans have their late night slices of pizza, and now, thanks to an entrepreneurial French baker, Parisians will have their late-night baguettes. For r euro, or about \$1.35, hungry night owls in Paris and the town of Hombourg-Haut in northeastern France can get a nice warm baguette well after the country's roughly 33,000 bakeries have closed for the night. Jean-Louis Hecht told the Associated Press he got the idea from living above the bakery he owns and having customers knocking on his door at all hours, seeking a carb fix to tide them over until the morning. His machines can hold up to 120 precooked baguettes at a time. In his first month he sold 1,600, and in July, his machines moved 4,500.







Help make the trip a relaxing part of the vacation.

A Garmin nüvi is still the best navigator on the road. And it makes a great gift for vacationers. The new 2012 nüvi models are available with FREE Lifetime Map Updates, the best FREE Digital 3D Traffic avoidance system, photoReal junction views, hands-free voice-activated navigation, and as always, NEVER require a data plan or navigation service fee. After losing themselves in the sites and sounds, they can still find the way home. This Holiday, Give a Garmin. To learn more, visit Garmin.com

Someone you know needs one



Unerion maps include up to four map updates per jets for the useful file of your product or as long as Glimini receives map date from a supplier, whichever is observed to be used earlier Additional memory (purchase required) may be represently for future trap suppliers. Therefore malify eights for the useful file of the production can be one cannot receive strict and fair this Supplier indicates in production as the production of the production and the suppliers of the supplie



PRE-EMPTIVE POLICING

9-4.7 METERS (ONE CITY BLOCK) | Police officers in Santa Cruz, Calif., are getting ahead of the bad guys by figuring out where crimes will be committed before they take place. Using a computer program developed by mathematicians, an anthropologist and by mathematicians, an anthropologist and computer program developed for the crimes and the crime the crimes are most likely to occur, so they can have an emost of the force at the ready.



THE SKI-SLOPE INCINERATOR

100 METERS I When the city of Copenhagen spent 3.6 billion knore (\$640 million) on a new waste-to-energy plant—the largest environmental project in Demnark—officials didn't want it to be just a 100-m-tall incinerator. They needed a way to turn the waste-treatment facility into a droufst destination, so they solicited bids to integrate the structure into the city. The unining architect, Bjarks nigels, designed a 425-m-long, 31,000-9-m ski slope with areas for skiers of all skill levels.



Very high triglycerides is a medical term for something serious:

TOO MUCH FAT IN YOUR BLOOD.

Ask your doctor about the FDA-approved medication made from omega-3 fish oil: LOVAZA

If you have high cholesterol, diabetes or are overweight, you may also be at risk for very high trialvoerides (≥500 mg/dL), which is a serious medical condition. There's only one FDA-approved medication for treating very high trialycerides that's made from omega-3 fish oil, LOVAZA, along with diet, has been clinically proven to lower very high triglycerides in adults. Individual results may vary. LOVAZA has not been shown to prevent heart attacks or strokes. LOVAZA is only available by prescription. You can't get it at a health food store. So if you think you might have very high triglycerides, talk to your doctor about getting tested and ask about LOVAZA.

LOVAZA is used along with a low-fat and low-cholesterol diet to lower very high triglycerides (fats) in your blood. Before taking LOVAZA, talk to your healthcare provider about how you can lower high blood fats by losing weight, if you are overweight, increasing physical exercise, lowering alcohol use, treating diseases such as diabetes and low thyroid (hypothyroidism), and adjusting the dose or changing other medicines that raise triglyceride levels such as certain blood pressure medicines and estrogens.

IMPORTANT SAFETY INFORMATION FOR LOVAZA

Tell your doctor if you are alleraic to fish or shellfish as LOVAZA may not be right for you. Talk to your doctor about any medical conditions you have and any medications you are taking, especially those that may increase your risk of bleeding. In some patients, LDL (bad) cholesterol may increase. Your healthcare provider should do blood tests before and during treatment with LOVAZA to check your cholesterol and triglyceride levels. If you have liver disease, you may require additional monitoring. Possible side effects include burping, upset stomach, and change in sense of taste. How supplied: 1-gram capsule

Please see important Patient Information on the next page. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

For more information, visit LOVAZA.com or call 1-877-LOVAZA1











enega 3 acid ethol estera

Read the Patient Information that comes with LOVAZA before you start. taking it, and each time you get a refill. There may be new information. This leaflet summarizes the most important information about LOVAZA and does not take the place of talking with your doctor about your condition or treatment. For more information, visit

What is LOVAZA?

LOVAZA is a prescription medicine, called a lipid-regulating medicine. for adults. LOVAZA is made of omega-3 fatty acids from oils of fish, such as salmon and mackerel. Omega-3 fatty acids are substances that your body needs but cannot produce itself.

Ι ΟΥΑΖΑ com or call 1-877-I ΟΥΑΖΑ1

LOVAZA is used along with a low-fat and low-cholesterol diet to lower very high triglycerides (fats) in your blood. Before taking LOVAZA, talk to your healthcare provider about how you can lower high blood fats by:

- · losing weight, if you are overweight
- · increasing physical exercise
- · lowering alcohol use · treating diseases such as diabetes

estrogens

and low thyroid (hypothyroidism) · adjusting the dose or changing triglyceride levels such as certain blood pressure medicines and

Treatment with LOVAZA has not been shown to prevent heart attacks or strokes.

LOVAZA has not been studied in children under the age of 18 years.

Who should NOT take LOVAZA?

Do not take LOVAZA if you: · are allergic to LOVAZA or any of its ingredients.

What should I tell my doctor before taking LOVAZA? Tell your doctor about all of your

medical conditions, including if you:

- . drink more than 2 glasses of alcohol daily.
- · have diabetes
- · have a thyroid problem called hypothyroidism.
- · have a liver problem.
- · have a pancreas problem
- · are allergic to fish and/or shellfish. LOVAZA may not be right for you.
- · are pregnant, or planning to become pregnant. It is not known if LOVAZA can harm your unborn
- · are breastfeeding. It is not known if LOVAZA passes into your milk and if it can harm your baby.

Tell your doctor about all the medicines you take, including prescription and non-prescription medicine, vitamins, and herbal supplements. LOVAZA and certain other medicines can interact. Especially tell your doctor if you take medicines that affect clotting such as anticoagulants or blood thinners. Examples of these medicines include aspirin, nonsteroidal anti-inflammatory agents (NSAIDS), warfarin, coumarin, and clopidogrel (PLAVIX®).

How should I take LOVAZA?

- . Take LOVAZA exactly as prescribed. Do not change your dose or stop LOVAZA without talking to your doctor
- . Your doctor should start you on a low-fat and low-cholesterol diet before giving you LOVAZA, Stay on this low-fat and low-cholesterol diet while taking LOVAZA.
- . Your doctor should do blood tests to check your triglyceride and cholesterol levels during treatment with LOVAZA.
- . If you have liver disease, your doctor should do blood tests to check your liver function during treatment with LOVAZA.

What are the possible side effects of LOVAZA?

The most common side effects with LOVAZA are burning, unset stomach and a change in your sense of taste.

LOVAZA may affect certain blood tests. It may change:

- . one of the tests to check liver function (ALT)
- . one of the tests to measure cholesterol levels (LDL-C)
- Talk to your doctor if you have side effects that bother you or that will not go away.

These are not all the side effects with LOVAZA. For more information, ask your doctor or pharmacist.

What are the ingredients in LOVAZA?

Active Ingredient: Omega-3-acid ethyl esters Inactive Ingredients: Gelatin, glycerol, purified water. alpha-tocopherol (in soybean oil)

LOVAZA is a registered trademark

of the GlaxoSmithKline group of companies.

PLAVIX is a registered trademark of Sanofi-Synthelabo.

Distributed by:



Research Triangle Park, NC 27789

@2010 GlaxoSmithKline. All rights reserved. All rights reserved. Printed in USA, LVZ808R0 April 2011.

experience our HOLIDAY STORE:

Gift ideas, food tastings, shopping, and fun giveaways

December 8 -13 @ Citi Pond^{5M} at Bryant Park For more information, go to: REALSIMPLE.COM/POPUPSHOP

SUPPORTING SPONSORS















TIME November 28, 2011

BY MICHAEL SCHUMAN/PARIS

Business 1

tistic heritage. A distaste for everything American. And a firm belief in the superiority of the welfare state.

Nothing may be more French than the conviction that government can and should provide for the well-being of its citizens. The welfare state-that political-economic concoction of extensive social spending, state protection and regulated capitalism-aids every French man, woman and child from the day of their birth to the time of their death. Family subsidies pay mothers to stay home to care for children or hire a nanny instead. Visits to the doctor are almost always free. So is education. Even at universities, tuition is a mere fraction of what Americans pay. Some students even receive stipends to cover their rent. Workers are protected by strict rules that make layoffs complicated and costly. Unemployment benefits and pensions are generous.

And for a long time it succeeded. Even the most dedicated Tea Partyer would have trouble dismissing the results. French policies have created a healthy, well-educated population with stable jobs at companies of international stature and an income level that ranks with the world's highest. The welfare state is such an integral part of French society that no one can imagine life without it.

But the French may have to. The cherished welfare state may not be able to survive, at least as we know it today. It was founded on the noblest intentions—to foster a more equitable society by ensuring that all, no matter what their social status, had access to the fruits and opportunities offered by an advanced economy; a sound education, proper health care and a worry-free retirement. In many ways, its mission has been realized. France's national health system, for example, is considered amone the world's best.

However, that idealism has run into a brick wall called financial reality. The cost of supporting state programs has been rising relentlessly. The French government will spend an estimated 30% of the nation's entire economic output on social services this year, compared with 12% in 1960, according to the Organisation for Economic Co-operation and Development (OECD).



Contretemps Protesting cost-cutting measures at Paris' Place de la Bastille

With debt and deficits mounting— France hasn't recorded a budget surplus since 1974—the pressure to control these expenses is becoming unbearable.

Almost the entire developed world is in the same fix as France. Even in the U.S., where the private sector plays a larger role in providing health care and other services, public expenditure on social programs has grown to about 20% of GDP from only 13% in 1980. The welfare state is part of the social fabric, of our way of life, says Emmanuel Moulin, an economic adviser to French President Nicolas Sarkozy. But "there is a need for reform. This is clear.

The burden will get heavier. As France's opulation ages, a shrinking workforce will have to support an expanding number of unproductive retirees. The OECD estimates that by 2005, state spending on the three services most affected by an aging population—long-term care, pensions and health—will reach close to 26% of GDP, compared with 23% last year. In the U.S., some key programs are facing a financing catastrophe. With more money flowing out of the funds supporting Medicare, the

some key programs are facing a financing catastrophe. With more money flowing dendary out of the funds supporting Medicare, the battleff The out of the funds of

-FRANÇOIS FILLON,
PRIME MINISTER OF FRANCE

spiral.

government's health-insurance scheme for the elderly will run short of sufficient funds to pay full benefits in 2044. Though it would be wrong to blame the enfeebled financial position of the West entirely on social spending—bloated bureaucracies, misguided tax policies and military escapades, bank bailouts and undemanding creditors have all played their parts—reform of the welfare state has become inseparable from ensuring the solvency of the Western world.

Achieving that reform could be the biggest challenge facing France and the rest of the West. Welfare state programs have become entwined with Western nations' conomies, politics and societies, influencing how people spend and save, work active, reture, educate children and care for elderly parents. Slimming the welfare state will make it harder for the West to escape the Great Recession and alleviate stubborn unemployment. Eliminating state benefits to the middle class and poor could also exacerbate income inequality and powerty.

exacroare income inequality and povery. The contentious decisions that reform demands will be the primary political battlefield in coming years across the West. The outcome of the zor U.S. presidential election will be heavily influenced by the hot-button issue of the future of Medicare, Medicaid and other entitlement programs. So will next year's presidential contest in France. "We are obligated to take on reforms that are difficult to impose but are encessary," say Michel Sapin, a member of Parliament from the Socialist Party. 'Bro the first time, fliscal reform] is the primordial issue of the election." The debatesSponsors of:

RETAIL BECOMING TAILOR MADE.







Retail signs that adjust to people's gender and age. Virtual catalogs showing entire collections. Innovations making shopping as personal as style. At Intel, we're working on technologies that will transform retail, as well as healthcare, energy, transportation and education. Because sponsoring tomorrow starts today.



at the seams of society, setting the rich against the poor, workers against management and country against country. What emerges from this process will reshape the economies and societies of the West for decades to come.

The Age of Austerity

THE MAIN PROBLEM WITH THE WELFARE state is finding the money to pay for it. Few want to lose their welfare-state perquisites, but few are willing to shell out more for them either. For decades, U.S. and European governments got around that hypocrisy by abusing their privileged position in the global economy. They plugged holes in their budgets by issuing bonds on international capital markets at minimal cost. But having piled up mountains of debt, Western democracies have badly shaken investors' faith in their long-term financial stability. The result is the euro-zone debt crisis. Countries like Greece got shut out of debt markets, forcing them into bailouts; others, like Italy, are financing themselves only at elevated borrowing costs, pushing them closer to the need for a rescue as well. Even the U.S., the bedrock of the global financial system, lost its triple-A credit rating in August because of record budget deficits, escalating debt and the inability of a paralyzed Washington to control them. Policymakers in France, which has so far dodged the fray, realize that their country could be next if they don't act.

The pressure has pushed the West into an unprecedented age of austerity. Welfare programs once considered sacrosanct have come under the knife. In Italy, the beleaguered government has increased health care fees. Spain raised the retirement age and eliminated baby bonuses. The U.K. government slashed welfare spending and is planning to do the same with pensions. In early November,

French Prime Minister François Fillon announced his second austerity budget in less than three months, which aimed to control future spending on family benefits and health care. "We have got to pull out of this dangerous spiral," he said.

In Washington, a congressional committee is wrangling over \$1.5 trillion in budget savings that will very likely bite into entitlement programs. Some extreme voices are calling for much more drastic measures. Earlier this year, U.S. Congressman Paul Ryan suggested transforming Medicare from a government program to a subsidized private one. Americans, said Congressman Eric Cantor, must "come to grips with the fact that promises have been made that frankly are not going to be kept for many."

The consequences could be severe. Average Americans and Europeans have become more reliant on welfare policies. Nearly half of Americans live in households that receive some sort of government benefit, a huge jump from 38% in 1998. With joblessness high and growth sluggish since the 2008 financial crisis, citizens of the West depend on government programs more than ever. Nearly 46 million Americans are on food stamps, a shocking 57% increase in three years.

Storming the Bastille (Again)

IT COMES AS NO SUPPRISE, THEN, THAT ISABELLE Allouges decided to fight for France's welfare state. Last year President Sarkozy raised the retirement age (by two years, to 67) as part of a pension reform, and millions of state employees walked off their jobs in protest. Alouges, a 56 year-old postal worker, joined them. For her, the Sarkozy government broke an unwritten contract with the country's workers. She did her part, spending many of he 24 years with France's postal service hauling heavy mail around the streets of Paris for a bare-bones salary. Her take home pay to

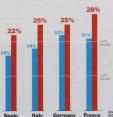
day is only \$2,100 a month. In return, she expected the government to provide a comfortable and early retirement. Alouges anticipated hanging up her mailbag around the age of £6. But after the pension reform, that suddenly became impossible. She had based the course of her life on the welfare state only, in her eyes, to see it unfairly and unilaterally changed. "The government is asking for more and more, and we are getting less," she laments.

The disgruntled have staged sit-ins on Madrid's plazas, battled riot police in Athens and marched through Rome. In the U.S., the Occupy Wall Street movement has morphed into a nationwide protest against deteriorating workingclass living standards. After the U.K. Parliament raised university tuition last year, rampaging students assaulted Prince Charles in his Rolls-Royce. Jean-Paul Fitoussi, research director at the Observatoire Français des Conjonctures Economiques in Paris, fears that drastic welfare-state reform, especially amid the protracted downturn, could undermine the social stability of the West. "If you retract the welfare state [at this time], you'll have a big political problem," he says. "We would soon have a revolution."

The idea isn't that far-fetched. The battle over the welfare state is deepening social divisions already inflamed by growing income inequality and globalization. Supporters of the welfare state see its retrenchment as a new form of class warfare, in which the rich, by manipulating the political system, foist the burden of fiscal repair onto the people who can least afford it. At the General Confederation of Labour in Paris, administrator Michel Doneddu argues that the welfare state is not to blame for France's economic woes. The real culprit, he says, is "economic liberalism." "The application of this idea has contributed to increasing inequality and







Sponsors of:

RUSH HOUR BECOMING A MOVING EXPERIENCE.

Networks that monitor road conditions. Intelligent highways that scan tires for tread wear. Smart transit signs that speed drivers to their destinations. At Intel, we're working on technologies that will take transportation, healthcare, energy, education and retail even further. Because sponsoring tomorrow starts today.



not at all to lowering unemployment," he says. The solution isn't to cut budgets but to find fresh cash. That means soaking big companies and rich capitalists with heftier taxes. "I want a more equal taxing of incomes," Doneddu insists.

Politicians are listening. Austerity programs in France and across Europe are imposing new taxes-often in lieu of deeper cuts to welfare spending. But there could be a limit to how much more revenue European governments can extract from their people. To keep the welfare state running, Europeans are already heavily burdened by taxes and other charges. The French government's tax receipts and other income was equivalent to 50% of GDP in 2010, compared with only 31% in the U.S., according to the OECD. Hiking taxes further could act as a disincentive to work harder. In the U.S., furthermore, tax increases are facing furious political opposition from those who believe higher taxes stifle job creation.

Building Better Welfare

SOME OF FRANCE'S WEALTHY SERM WILLing to pay. Echoing Warren Buffett's "tax
me" plea, Maurice Lévy, chairman of Parisbased advertising giant Publicis Groupe,
has offered to endure more taxes to save
the welfare state, even though the government already claims almost half his income. But he doesn't want his hard-earned
cash wasted in inefficiency and excess."
am willing to pay more, provided we do
what is necessary in order to stop this addiction we have in Europe to deficits and
debt', 'he says."

What the West needs most is a return to what the French call solidarité: mutual sacrifice for the common good

Lévy's demands go beyond budget cutting. He wants to see a better welfare state, which would enhance France's economic competitiveness. Overbearing charges for social services make it difficult for companies to control costs, state coddling saps the entrepreneurial spirit and blunts the desire to excel. The welfare state has gone too far, he contends. "People [in France] believe there is this provident state, this manna, that will take care of them," he says, "We are not encouraging the people to take their future into their hands."

Marine Guillemain is also worried about France's future. But for her, the welfare state is the solution. Guillemain, 40, has been a public-school teacher in Paris for 15 years. She, like many other teachers, is up in arms over deep cuts to the education system. By 2021, more than 56,000 teaching jobs will have been eliminated (mainly through attrition) over a period of five years. For Guillemain, such

downsizing deprives the nation's youth of their competitive edge vs. students in Asia and elsewhere. "The reforms have worked to the detriment of the children," she says. Like Alouges, Guillemain has chosen to fight back. In late September, she joined a protest against the cutback. "Education has an impact on society and democracy," Guillemain says.

The challenge for political leaders is daunting, though not impossible to some. Sapin, the Socialist parliamentarian, believes a complete overhaul of the welfare state is unnecessary. The goal, he says, should be to restrain future expenditure. That means France's leaders should approach the budget like a skilled plastic surgeon, carefully nipping here and tucking there with a fine scalpel. "You have to be in telligent and subtle in what taxes you raise and what programs you cut!" Sapin says.

But the West may have lost the luxury of time. With debt ballooning and investors in panic, policymakers may need to make tougher choices than ever before in allocating tax receipts. Will they fund health care benefits for old ladies, buy more tanks or hire more teachers? Countries may have to liberalize immigration policies to expand their working populations and offset the burden of aging, no matter how controversial that might be. To allow companies to better compete, sources of funding might have to be shifted from corporate contributions to taxes on consumption. Policymakers need faster economic growth to close deficits, which will entail reforms across their economies. European countries will have to slice through regulation that impedes competition and entrepreneurship. The U.S. will need to embrace trade and make its form of capitalism more equitable. "We need growth to make the model sustainable," says Monika Queisser, an economist

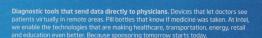
at the OECD in Paris. Perhaps what the West needs most is a return to the spirit behind the welfare state, what the French call solidaritémutual sacrifice for the common good. But as conservatives and liberals, rich and poor, unionists and executives all bicker in a fruitless quest to preserve their privileges or seek political advantage, solidarité is sadly in short supply. The only assured outcome is more conflict. Alouges, the postal worker, pledges to take to the streets over every government cut. On a blackboard by her desk she has written a motto: "He who does not fight has lost; he who fights may lose." Whatever happens, the welfare state won't go quietly, -WITH REPORTING BY DHEEPTHI NAMASIVAYAM/PARIS

C'est la vie The French way of life may soon be a thing of the past



Sponsors of:

HEAD-TO-TOE HEALTHCARE AT YOUR FINGERTIPS.







Super Mario Swoops In

New European Central Bank chief Mario Draghi is the euro's last line of defense

BY LEO CENDROWICZ

TALY ONCE BROUGHT TO MIND DELIGHTful images of the Pantheon and Pisa, Armani and Alfa Romeo. But with the euro-zone crisis raging on, any mention of Italy lately evokes thoughts of the country's humongous debt, chronic unemployment, endemic corruption and chaotic politics.

Whether that national story can once again be rewritten depends in part on Mario Draghi, former head of the Bank of Italy, who became the president of the European Central Bank (ECB) on Nov. 1. Draghi takes the helm during the euro's most tumultuous period since the single currency's launch in 1999, with mounting debt woes once again threatening to tear it apart and his home country in the middle of the storm. Replacing Frenchman Jean-Claude Trichet, Draghi, 64, has an awesome responsibility over his eight-year term: as guardian of the euro, he must safeguard the stability of the currency, shore up investor confidence, avert a financial meltdown and steer the region's economy back to growth-all while singing the ECB's mantra of controlled inflation. As head of Europe's only agency with the financial

muscle to bolster the continent's bond markets, he is the euro's last line of defense.

It may be the toughest job yet for a central banker. While most of the world's chief financiers have a single economy to whip into shape, Draghi has 17. He has to warn indebted Europe that its days on the ECB's dole are numbered, while convincing global investors that the euro and the continent's national currencies are still worth their salt. And he can't rely on fancy charts and models to do his convincing. Like many other central bankers since the financial crisis began, Draghi has been forced from the shadowy ranks of the technocrats into a brutally public role, one in which complex math doesn't translate. Politicians from Warsaw to Washington

Should Draghi tear up the ECB rule book and risk his reputation to save Europe? have been upping the heat on central bankers, arguing they are doing either too much or too little to right the economy.

Draghi's task is all the more delicate since ancient stereotypes about nationality matter in the European Union and have resurfaced with a vengeance over the past 18 months. Germany, the E.U.'s paymaster, is still grumbling loudly about what it sees as its feckless and economically decrepit southern neighbors. When Draghi's name first emerged earlier this year as a candidate for the ECB's top job, the influential German tabloid Bild ran the headline MAMMA MIA, quipping that inflation and Italians go together like "tomato sauce and pasta." Draghi, who is credited with righting Italy's economy in the 1990s as Finance Minister, has quietly reiterated his Teutonic anti-inflation credentials-a key quality to Germany, a nation hammered by hyperinflation after World War I. Bild eventually embraced him and printed a photomontage of the Italian in a Prussianstyle spiked helmet.

But Draghi faces other critics. Bundesbank president Jens Weidmann has all but described the ECB's European bailouts as printing money, while Jürgen Stark resigned from the ECB board over the issue.

The array of competing interests illustrates Draghi's dilemma: Should he tear up the ECB rule book and risk his reputation to save talay and greater Europe? Europe's bond markets could take a serious beating and spark another global financial meltdown if the ECB starts to look "more worried about inflation than the euro's survival," say Philip Whyte of the London-based Centre for European Reform.

So far, Draghi has shown a willingness to act. He deficed inflation hawks by slashing euro zone interest rates from 1.5% to 1.25% at his first ECB board meeting, on Nov. 3. And he has continued Trichet's policy of vacuuming up European bonds. Whether his softer line will continue remains to be seen. But one thing is clear: the man they call Super Mario for his political savvy and adroit leadership isn't easily swayed. "Continuity, credibility and consistency are of the essence," he said at the ECB meeting in Frankfurt. "As for the future, let me do my work."







A BREAKTHROUGH IN THE AMERICAN PENSION CRISIS.

Pension plan volatility doesn't just threaten the future growth of thousands of American companies and organizations. It also puts the retirement promises they've made to their workers at risk.

Prudential's solution; structuring the country's first-ever corporate Pension Buy-In. This unique transaction transfers pension risk from the company to Prudential. So the retirements of their current and former employees are more secure. And the company can focus on its core business.

Keeping pension plans healthy is no small challenge. But with bold thinking and sound risk management, THAT'S A CHALLENGE WE CAN MEET.

To learn more about this and other innovations at Prudential, go to BringYourChallenges.com



The versatile dress knit in a soft, lustrous silk blend with a touch of cashmere

SPECIAL INTRODUCTORY PRICE...

Your Perfect Knit.

- · The subtle sheen and superior drape of silk combined with the easy breathability of cotton. Add a touch of cashmere and you have the ideal dress knit. Superior comfort, durability and presentation. A perfect fit in every way. We guarantee it.
- . Dress it up for the office or down for the weekend. one wear and you will understand why it is a Paul Fredrick customer favorite.

POLO



- Regular Sizes: S,M,L,XL,XXL,3XL,4XL
- Tall Sizes: LT,XLT,XXLT,3XLT,4XLT

Paul Fredrick YOUR FIT. YOUR STYLE."

Your Style

- 7 Colors
- · Long Sleeve MOCK
- Long Sleeve POLO

Ivory Chestnut Blue

Specify promotional code SYHSTG. Expires 11/31/12.

New customer offer. Limit four shirts per customer. Shipping charges extra. Cannot be combined with other offers. Free exchanges.

Order Today! Call 800-309-6000 or visit paulfredrick.com/silkcashmere



The versatile dress knit in a soft, lustrous silk

SPECIAL INTRODUCTORY



- superior drape of silk combined with the easy breathability of cotton. Add a touch of cashmere and you have the ideal dress knit. Superior comfort, durability and presentation. A perfect fit in every way. We guarantee it.
- . Dress it up for the office or down for the weekend. one wear and you will understand why it is a Paul Fredrick customer favorite.

Your Fit

- Regular Sizes: S,M,L,XL,XXL,3XL,4XL
- Tall Sizes: LT.XLT.XXLT.3XLT.4XLT

Paul Fredrick

Your Style

- 7 Colors
- Long Sleeve MOCK
- Long Sleeve POLO

Chestnut

Specify promotional code SYHSTG. Expires 11/31/12.

New customer offer. Limit four shirts per customer. Shipping charges extra. Cannot be combined with other offers. Free exchanges.

Order Today! Call 800-309-6000 or visit paulfredrick.com/silkcashmere



The Culture

testing by Ourse Cildagologica at VCN, Photograph by Sam Hofman

Pop Chart



GOOD WEEK

Ford's Theatre O'Reilly's Killing Lincoln in its bookshop be-

A copper sword was stolen from a sculpture that tops the Illinois monument.

FASHION Jay-Z's 99% Problem

He may be worth an estimated \$450 million, but Jay-Z still identifies with the 99%-at least when it comes to clothing. Twitter lit up in support of the rapper's Occupy Wall Streetinspired shirt after he was photographed wearing it backstage at one of his concerts. But the Internet tide quickly turned when it was revealed that Rocawear, the clothing company he cofounded, has no plans to donate proceeds to the movement.





Reverse CliffsNotes

Oscar hopefuls rely on estab lished brands: big stars, prestigious historical figures and beloved novels, including this new quartet. Let the grumblings of "The book was better!" begin.









told me that I

was our genera

Worksong"



What Vow of Poverty?

nun is suing Walt Disney Co. and Sony Pictures, claiming that her 1987 memoir was the basis for the Sister Act movles and Broadway musical. Two things are unclear: 1) Why is the suit being filed nearly 20 years after the first film hit theaters? and 2) Did the litigious nun witness a Mob hit, à la Whoopi Goldberg's character?

MUSIC Drake, Take Care

On his sophomore album, a synthdriven, downbeat R&B-and-hip-hop hybrid, Drake turns self-analysis into an art form. He grapples with feelings of emptiness and guilt but does so with some of the catchiest beats we've heard all fall. "[I'm] drinking every night," he laments. "'cause we drink to my accomplishments." Sorry, Drake. Bottoms up! - CLAIRE SUDDATH



I still kind of can't

believe my voice

on this recording

it's very pure. ("Ev



RIVERAS REUNITED "Diego Riveru: Murals for the Museum of Modern Art," at New York City's MOMA through May 14, brings together eight murals by the Mexican painter for the Just time since their creation for the museum in 1931. The artworks, including The Uprising, above, depict revolution in Rivera's native country and images of Depression era New York.



A River of Money

In the art world, sometimes simplicity sells. On Nov. 8. a bland photo of the Rhine River by Andreas Gursky brought in a record \$4,338,500 at a Christie's auction in New York City. But Rhein II, which measures 73 by 143 in, is shrewdly and deliberately featureless. Gursky, famous for his digital manipulations, cut out people and a building to offer an image of nature stripped bare of romantic expectations.





EXPANSION A Most Mighty Pen

Sylvester Stallone is a Renaissance man. He acts, he directs, he designs extremely expensive writing utensils covered in skulls and serpents. The Chaos pen (above) is the first in a series of highquality pens (running \$5,770 to \$69,350) made in sterling-silver and 18-karat-gold versions, Luckily, they're so ugly, no one will steal them.

4 THINGS YOU DON'T HAVE TO WORRY ABOUT THIS WEEK

1. The end of violent shoot-'em-up video games. Call of Duty: Modern Warfare 3 earned \$400 million in 24 hours, making it the fastest-selling entertainment item ever.

2. What Chelsea Clinton is doing with her life. NBC News kindly helped her figure that one out by hiring her as a correspondent.

3. Who's the fairest of them all. With both trailers for the two Snow White movies finally out, you have two black-haired maidens to choose from.

4. Which new Broadway musical to see. Strangely, not a single one has opened so far this season.

HOLIDAY MOVIE ** PREVIEW

The Adventures of Tintin Steven Spielberg's first animated film, some 30 years in

A magical ode to the screen wizards who inspired Martin Scorsese

The Descendants
Harried dad George
Clooney unpacks
his wife's secrets

Charlize Theron as a prom queen gone to seed

Shame and A Dangerous Method

Actor Michael
Fassbender is
polsed for global
domination
Corlolanus
Ralph Fiennes does

The Artist A silent movie is an instant mode classic and an

My Week with Marilyn Michelle Williams resurrects Monroe,

Jonah Hill tries some real-life babysitting—and

TINTIN IN HOLLYWOOD

How Steven Spielberg brought the classic comic-book character to 3-D life

BY LEV GROSSMAN



IN THE BEGINNING WAS THE WORD, AND the word was Thith. Steven Spielberg didn't know what it meant. "Raiders of the Lost Ark had just opened overseas," he says, "and all through the French reviews, which I couldn't read, there was a smattering of Thith everywhere."

ing of Imme everywhere. Thinkin so foots the indefatigable, incurably innocent boy reporter who has sold upwards of 200 million books worldwide since he first appeared in a comis strip in 1929—though he has somehow managed to do it without making himself a household name in the U.S. Once all this was explained to him, Spielberg hunted down his very first Thintin book, which happened to be The Seven Crystal Balls. "It was like a movie, with beautifully rendered storyboards," he says. "It understood the humor. I just got it without having to hear the words."

In 1983 Spielberg called Hergé, Tintin's creator, who was 75, to talk about making a *Tintin* movie. Spielberg planned to visit Hergé in Brussels a few weeks later, but Hergé died before that could happen, and the project stalled. It would be nearly three decades until Spielberg brought Tintin to theaters.

It's either touching or ironic, or a bit of both, that Tinin is making his big-budget, big screen debut in *The Adventures* (*Tinit* nat a moment when grave economic woes threaten the great pan European hero par excellence—he was pan European hero par excellence—he was pan European hefore there was a pan-Europe—and far from fading away, he's about to take a shot at going global, with the help of an American and a New Zealander.

Tintin didn't start out pan-European, let alone global. He started out Belgian, Hergé was the pen name of Georges Remi, born in 1907, the son of a candy factory worker in Brussels. But today Tintin's story has been translated into 60 languages. (He is Dingding in Chinese and Tincjo in Esperanto.) It's not hard to see why: the Tintin books are some of the most satisfying popular

FROM LEFT: HERGE-MOULINSART 2011; PARAMOUNT





Double header Tintin is one of two Spielberg movies out in December. The other is War Horse, based on the Tony-winning World War 1-era play

Zealand without having Tintin become an

eternally dogged underdog-undersized, important part of your life," Jackson says. underestimated and always outgunned. The challenge was to turn Herge's but undaunted. "Tintin can't be dissuaded famous liane claire style into a 3-D world. from his quests," Spielberg says. "He's "The books became the bible for all the set relentless in his pursuit of the solution to decorators and production designers at these exotic mysteries." Like Lewis Car-Weta," Spielberg says. The biggest chalroll's Alice. Tintin is the one sane mind lenge was Tintin himself, whose face on among schemers, dipsomaniacs, eccentric paper is as simple and elegant as a punctuageniuses and blithering idiots. Hergé drew tion mark. "We probably spent two or his panels in an instantly recognizable three years working at every subtlety and style known as lique claire, or clear line. nuance of Tintin's face," Jackson says. "Ste-Each frame is a window into a bright, simven and I would have long videoconferencple, comprehensible universe, both forees with the design team where we would ground and background in perfect focus, look at CGI heads rotating on turntables

entertainment ever created. Tintin is the

with a bare minimum of shadows.

It wasn't until 2003 that Spielberg went

back to the project. "I suddenly had a brain-

storm, and I figured out how to do this," he

capture animation, or as Spielberg calls it,

performance capture. He used the same an-

imators who worked with James Cameron

on Avatar: Weta Digital, based in New Zea-

land and co-founded by director Peter Jack-

son. The project evolved into a full-blown

collaboration. "You can't grow up in New

says. "I also figured out what medium I

wanted"-that medium was motion-

THE ADVENTURES OF TINTIN

and say, 'Could his eyes be 15% smaller? Could his eyebrows be a little bit lower?""

For Spielberg, directing an all-digital movie came with a learning curve. "I'm used to coming on a set and being inspired by the actual quality of the sky that day, the way the light is hitting the trees and the buildings," he says. But there was no set for Tintin. "It was just like a big basketball court, a big, white, clinically, surgically antiseptic space." Spielberg worked with a digital model of the space, which he watched on a screen as he shot the actors.

The result is a brightly colored, relentlessly paced adventure with the same pulpy, retro, swashbuckling quality as an Indiana Jones movie. The action sequences, liberated from the laws of physics and movie budgets, must be among the most elaborate ever devised. At one point, Tintin, his dog Snowy and the perpetually drunk mariner sidekick Captain Haddock chase a falcon through a Moroccan hill town through which a rampaging flood is roaring, picking up and destroying vehicles as they go. Hergé's love of physical comedy is all there; he borrowed liberally from movies, especially Charlie Chaplin's, and Spielberg collects on the debt, transplanting the gags back into their original medium.

The movie is densely packed with little Tintinacious touches for serious fans. Captain Haddock, played by Andy Serkis (the performance-capture veteran who also portrayed Gollum in Jackson's Lord of the Rings trilogy), looks particularly authentic: they've nailed the wet black thatch of hair and the tiny gin-blue eyes. Spielberg imported the Siamese cat from The Seven Crystal Balls, and there are at least two crabs with golden claws. He pulls off a brilliant gag wherein a swimming Tintin's red quiff substitutes for a shark's sinister dorsal fin-a nod to Spielberg's Jaws.

All this high-powered technology serves a movie set in an indeterminate but decidedly retro past, a dreamy world of vintage cars and rotary phones. It turns out that it takes the computing resources of a cutting-edge data center to bring to 3-D life what Hergé created using only pen and paper. "That's probably the thing that impressed me the most about the books," Spielberg says, "that Hergé was a filmmaker in his own right."

90





YOUR VISION



YOUR SPECIALIST

INTRODUCING NEW CENTRUM SPECIALIST" VISION

New Centrum Specialist Vision is the first and only complete multivitamin* enhanced with higher* levels of Lutein and the addition of Zeaxanthin. It's specially designed to help maintain healthy vision, support vision sharpness and improve the eyes' natural response to glare** plus you get all the health benefits of Centrum.





Find the Centrum Specialist" that's right for you.

©2011 Pfizer



www.centrum.com

*Among leading multivitamin brands.

*As compared to Centrum Silver Adult, *Emerging science is suggesting that key nutrients such as Lutein and Zeaxanthin help support health

This product is not intended to dispress treat care or present any disease



The Dream Machine. Scorsese's lost-boy adventure is a masterpiece

By Richard Corliss

MARTIN SCORSESE MADE HIS his absent, alcoholic uncle. rep as the fierce bard of American gangster machismo. From pompous station inspector Mean Streets to The Departed, he has sung the body choleric. So why would he make a film of The Invention of Hugo Cabret, Brian Selznick's rhapsodically nostalgic children's book? Obsessed with assembling Because Hugo is fascinated by artistic contraptions that cast spells over the audience. And Hugo also filches machine Scorsese, a lifelong lover and parts from the toy store of promoter of classic films, has stern, gloomy Papa Georges never lost his infant wonder at (Ben Kingsley). The boy's the spectacle of giant images in a darkened movie palace. So Hugo is not only an act of devotion from a modern movie artist to the wizards who inspired

An orphan since the death of his beloved father (Jude Law), Hugo (Asa Butterfield) lives in Paris' Montparnasse train station, where he keeps the clocks running perfectly-a job left him by

him; it is also Scorsese's imagi-

nary autobiography.

Fearful of being caught by the (Sacha Baron Cohen) and with no way of cashing his uncle's checks, Hugo lives furtively in the clock tower, surviving by stealing food from local shops. a mysterious automaton his father had been working on, friendship with Georges' goddaughter Isabelle (Chloë Grace Moretz) will help him unwrap sensational secrets, including the invention of movie magic.

Scorsese and screenwriter John Logan share Selznick's belief that movies are both the stuff dreams are made of and the product of supreme technological expertise. It's a machine that makes art. That's evident in the two amazing tracking shots that open Hugo: the first traversing the Paris skyline to alight inside the train station, the second scampering after Hugo through the building's clockwork innards. Shot in 3-D (a format that dates back nearly to the dawn of cinema), these images impart a vertiginous ecstasy.

Scorsese, no less than Selz nick, wants to open viewers' eves to the sacred sorcery of the earliest works by the Lumière brothers, Georges Méliès, Harold Lloyd-the whole fabulous parade-and to show how these masterpieces were birthed by tinkerers of genius. But Hugo is more than a love letter to film preservation. It gives full Dickensian heft to its sad, tender story of a lost boy on a mission. Bursting with emotion and exquisitely inhabited by Butterfield and the rest of the cast, this beautiful film is a mechanism that comes to life at the turn of a

key in the shape of a heart.

More Movies!

HAPPY FEET TWO

dancing! Director George



ARTHUR CHRISTMAS

TINKER TAILOR SOLDIER SPY





The Cuckold's Nest. George Clooney wrangles a fractious family

A WASPISH FAMILY CAN BE cute and fun, even if hostilities are boiling over at a deathbed-such is the position of The Descendants. It's not high art, but Sideways director Alexander Pavne's latest makes for an ideal holiday movie. If your clan is growing tiresome, you can escape to the more exotic woes of Hawaii attorney and land baron Matt King (George Clooney), about to cast the decisive vote in the sale of his extended family's last piece of virgin Hawaiian shore-the final legacy of their forefathers. But the real crisis is that he has to pull the plug on his wife Elizabeth (Patricia Hastie). who's in an irreversible coma after a speedboat accident, and find a way to comfort their two children

Then comes another piece of crushing news, this time from his mouthy older daughter, 17-year-old Alex (the supremely confident Shailene Woodley): before her accident. Mom was having an affair. Matt island-hops in search of her lover (Matthew Lillard), accompanied by Alex, her amiably idiotic friend Sid (Nick Krause) and the youngest King, 10-yearold Scottie (Amara Miller). whose hobbies include sticking out her tongue and giving the

finger. She's Little Miss Stick It Where the Sun Don't Shine.

The darkness of The Descendants' comedy is eased by the promise of renewed family togetherness, plus a backdrop usually reserved for surfing movies. But Payne doesn't linger on any tropical sunsets; he wants us to see the 50th state as a place where people actually live and raise families and die. The movie continually circles back to silent Elizabeth's bedside, where angry words are bandied about with an unnatural archness, yet it's curiously easy to let her go because of the mounting evidence that she was a shallow thrill seeker and adulterer. (Clooney's ego is in marvelous check here; after Matt finds out he's been cuckolded, he runs flat-footed through his neighborhood in deck shoes, shorts and a look of comic anguish.) Payne sneaks in some genuinely moving moments-Alex plunging into a pool to absorb bad news, Matt struggling to let go of his ire, a wounded family sitting down companionably to watch (what else?) a movie together. The Descendants offers the same promise of ease-to watch it is to slip into a warm bath of Clooney at his most vulnerable. - MARY POLS

Young Adult: When the high school prom queen refuses to grow up

an intimate peek into a wayward soul. -R.C. (12/9)



TIME November 28, 2011

THE WILD IRISH BOY

Superhero, hunger striker, Mr. Rochester, psychiatrist, sex addict. Michael Fassbender can play anyone—with or without his clothes on BY IESSICA WINTER

MICHAEL FASSBENDER HAS A LOOK, IT'S A CROSS between a stare, a glare and a laser attack. The muscles in his finely angled face tense, and his blue-green eyes all but pulsate in their sockets. In his breakthrough film, Hunger (2008), Fassbender, playing the IRA martyr Bobby Sands, casts that look on a well-meaning priest, vaporizing any pleas against the hunger strike that will kill him. You see the look in Inglourious Basterds (2009), just before Fassbender's English spy tongue-lashes a Nazi lout, and in this year's Jane Eyre, when his Rochester matches wits with the equally steely heroine. The look is the standout special effect in this summer's X-Men: First Class, which cast Fassbender as the vengeful mutant Magneto, and it's the default expression of Brandon, the tormented sex addict of December's Shame, for which Fassbender is being touted for an Oscar nomination.

For his growing constituency—art-house filmgeers, blockbuster directors, sentient heterosexual females—the tension and intrigue Fassbender can generate with one look partly explain why the 34 year-old Irishman is one of the most thrilling actors of his generation. His storm-cloud charisma, readiness for extreme physical transformation and melodic Irish lilt position him as an heir to Daniel Day-Lewis.

But when one meets Michael Fassbender, there's no look. In the flesh, he seems younger and springier than the gravely poised figure he cuts in movies, and his wide, disarming grin evokes an extait wolf puppy. "He's very playful and very funny," says David Gronenberg, director of another Oscar-season hopeful, A Dunacrous Method, in which Fassbender plays

the pioneering psychiatrist Carl Jung. "He's a total delight. He's kind of a wild Irish boy."

The wild Irish boy was born in Heidelberg in 1977 to a German father and a Northern Irish mother. When he was a toddler, the familyincluding his older sister Catherine-moved to the village of Killarney, where his parents ran a restaurant and Michael was an altar boy. "I remember hearing that the spirit was always next to you, so I would always make room in my bed for the spirit," he says with a laugh, "I'd make room for the teddy bears, Jesus and me. And then I'd wake up in the morning, and I'd squashed 'em all." Though the Fassbenders were somewhat pro forma Catholics ("I think we just went to church on Sunday because everyone else was doing it"), altar-boy duties awakened Michael's interest in stagecraft. "The suspense of reality-the idea that wine turns into blood and bread turns into flesh—was a very visceral thing to deal with. and the ritual and theater of it," he says. "I suppose it was my first experience of being onstage." Growing up, Fassbender idolized the late actor

Growing up, Fassbender idolized the late actor John Cazale (mention the scene in Godjaher II when Cazale bewails the Corleone line of succession while flailing around in a recliner, and Fassbender all but leaps into the air with excitement) and dabbled in local theater. At 18, he produced, directed and played Mr. Pink in a theater version of Quentin Tarantino's flin Reservoir Dogs, as he told Tarantino when he auditioned for Inglourious Basterds. 'I said, 'Look, man, it was for charity,' and he said'—here Fassbender arches his brows and widnes his eyes, speeds up his cadence and talks out of his adenoids—"Hey, that's cool, man, that's cool, a long as people aren't making.

Fassbender, Fast



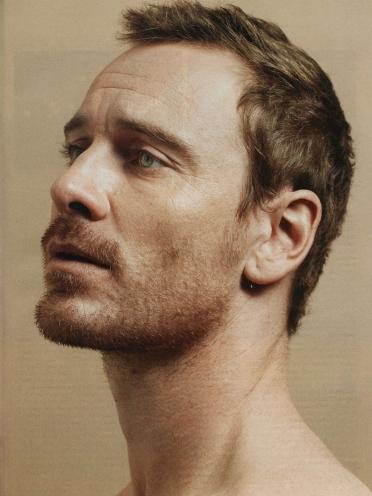
HUNGER
Fassbender subsisted for weeks on 600 calories a day to play an IRA activist



The German-born actor spricht Deutsch in Tarantino's Nazi-hunting ensemble



He's the prickly, smoldering Rochester in the most recent take on the Brontë classic







SHAME

money off my shit." It's an uncanny Tarantino impression.

After studying acting in Cork and London and nearly a decade of journeyman TV work, Fassbender auditioned for the debut feature of the acclaimed British visual artist Steve McOueen. "Steve changed my life with Hunger," says Fassbender, who carved some 33 lb. (15 kg) from his already wiry frame to play Sands.

"When Michael came in, I thought he was cocky," says McQueen, who also directed Shame. "It was a strange mixture of bravado and 'I can't be bothered.' It was my first time directing, and I didn't understand that actors have to deal with a lot of rejection. At that point in Michael's path, what if that door gets slammed in your face again?" They met twice more, "and he just shone through," McQueen says. "After I told him he had the part, I jumped on the back of his motorcycle and we went off for a drink. It was kind of romantic."

Many would use stronger language to describe a ride on the back of Fassbender's motorcycle. Thus he was ideally cast as English literature's ultimate romantic hero in Jane Eure, even if his method was hardly Method. "There's a scene where Rochester and Jane are face to face, very close, staring intensely, but really we're just desperately trying not to burst out laughing," says his co-star Mia Wasikowska. "He plays all these brooding, dark characters, but the real Michael is so light and goofy. He's a good mimic because he watches people closely and finds them inside of him, and he's not judgmental."

is key to the deeply compromised characters Fassbender plays in A Dangerous Method (a therapist having an affair with his troubled patient) and Shame (a perpetualmotion sex machine). To prepare for Method, Fassbender read stacks of Jung and consulted with his sister Catherine, a psychologist who studies ADHD in children: for Shame, he met with real-life sex addicts. "Brandon is self-loathing, and it creates a pattern," he says, "You go out, you have a few drinks, you have this uncontrollable urge to be with somebody, to get that release, and then there's this feeling of shame, that you're not in control of yourself. To push away the feeling of shame, you go out and do it again. You double the shame and triple the shame."

Fassbender is in every scene of Shame, which earned an NC-17 rating for nudity and explicit sex scenes. He first saw the film at its Venice world premiere, with his father sitting behind him. "My mum was supposed to be there too, but her back played up at the last minute, thank God," he says. "Obviously, I knew what we'd filmed, and it was all sort of real, and there to be seen. But actually watching it, I was a

'He's not afraid to be vulnerable,' says director McQueen. 'There's a huge feminine side to him."

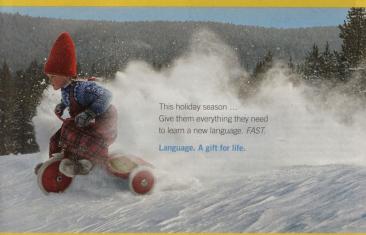
little bit 'Holy shit.' Then the lights came on straightaway as the credits were still rolling, and I was like"-he ducks on the couch, one leg in the air like a shield, as a strangled hysteria creeps into his voice-"Give me a second here. Let me put my clothes on! Just give me five."

"He's not afraid to be vulnerable," McOueen says. "There's a huge feminine side to him-he's very manly, but at the same time, there's this beautiful fragility." He adds, "All these superhero things and X-Menthings, they're great, whatever, but we need Michael here on earth."

He's referring to Fassbender's sideline in effects-laden tent poles such as X-Men: First Class and Ridley Scott's forthcoming sci-fi epic Prometheus (Fassbender has also signed up for McQueen's period drama Twelve Years a Slave and will have a role in indie hero Jim Jarmusch's next project). But after spending time in his company, talking to his colleague-fans and seeing his Tarantino impression ("He also does a great Michael McDonald impersonation," McQueen adds), one suspects that Fassbender isn't merely cinema's next great thespian. He might also be an untapped comic genius.

"I would like to do a comedy!" he says. "A lot of directors and people in the industry probably think I'm this intense sort of dude, who's like, 'Don't talk to me right now,' and listening to goth in the corner naked with a banana preparing." Cue the wolf-puppy smile, "So, definitely, But you know, if somebody pulled the plug right now, I really wouldn't have anything to complain about."

Unwrap a new language. Open up the world.



RosettaStone •



GIVE THE GIFT OF LANGUAGE

RosettaStone.com • (877) 204-4682



While Rome Burns. Ralph Fiennes and Shakespeare go to war

THE TV NEWS CHANNELS HAVE announced that civil liberties have been suspended owing to popular unrest in "a place calling itself Rome." It's not the Eternal City of scented majesty but a contemporary vision of what the Italian capital could become if the nation went bankrupt (timely!) and exploded into anarchy. In this tinderbox, General Caius Martius (Ralph Fiennes) is the match. A vaunted warrior back from the Empire's provinces, where he fought the Volscian leader Tullus Aufidius (Gerard Butler), he quells an indigenous revolt by denying grain supplies to the rabble who would Occupy the Coliseum

In Coriolanus, hard times deserve a hard man-Rome's own barbarian-and Martius. with a steely glower and a battle scar that curves across his cheek like a Riviera cornice. has been bred to warrior status by his fiery mother Volumnia (Vanessa Redgrave). "There is no more mercy in him than there is milk in a male tiger," says one of his Senate colleagues (Brian Cox). Martius parlays the pitiless power of a jungle beast into a consulship. His supporters should have considered a simple verity: that the men sent off to fight and slaughter in a country's name are not often the men suited to rule when they return. It takes a different skill set.

Making his film-directorial debut with one of Shakespeare's most lurid, least performed plays, Fiennes displays a sure, strong hand for most of the movie's tumultuous two hours. Similar in its brutal spirit to Ian McKellen's brownshirt update of Richard III, Coriolanus was shot in Serbia, where the landscapes are as ravaged by war as Martius' body is. ("Every gash," he boasts, "was an enemy's grave.") Butler lends full body and heart to the more humane Aufidius. and Redgrave, unleashing her most ferocious film performance in decades, locates the sexual tension in Volumnia's swathing of her son's wounds. It is she, not Martius' wife Virgilia (Jessica Chastain). who is the primal force in his life. The film has fifth-act problems, but so does the play, and Fiennes' bleak overview should leave receptive viewers feeling daunted and haunted-exactly the right takeaway from a brutal, belligerent tragedy. - R.C.

A Spin on Silent-Era Hollywood That Will Leave You Speechless

It's French, it's black and white, and barely a word is spoken. "Go see what?" you ask. All right, it's also a Hollywood love story set at the end of the silent-movie era, about a dashing star and the perky starlet who steals his and America's heart when talkies come in. Still not convinced? Then we'll call it the most effervescent delight in years.

Michel Hazanavicius' The Artist was the sensation of this year's Cannes Film Festival (where
leading man Jean Dujardin won the Best Actor
prize) and has been piling up accolades ever since.
Still, the very premise—a silent movie about
silent movies—seems more suited to a varietyshow sketch. As the film begins and George Valentin (Dujardin) bounds across the screen in a
Douglas Fairbanks—style costume epic, you may
surrender to the silly brio while wondering if
The Artist can sustain itself to feature length. But
every time the director seems to have painted
himself into a corner, he paints himself up the
walls, around the windows, across the ceiling
and, by the end, voilal—irst the Sistine Chapel.

An endlessly inventive farceur, Hazanavicius also kindles a romantic glow between George, whose fortunes are about to fall, and Peppy Miller (Bérénice Bejo), a chorine destined to be a diva in the talkies. Shot in to Sa Angeles with a mostly American cast, including James Cromwell, John Goodman and Penelope Ann Miller, The Artist is a unique and enchanting hybrid. Curmudgeons are advised to go with the flow and surrender to rapture.——R.C. (1/125)







The Goddess Who Fell to Earth. Michelle Williams rekindles Marilyn's magic

By Mary Pols

IN 1956 A PRIVILEGED YOUNG Englishman named Colin Clark used family connections to land a job as Sir Laurence Olivier's third assistant director on The Prince and the Showairl, which (mis)cast Marilyn Monroe as Olivier's love interest. Nearly 40 years later, Clark published a dishy set diary, detailing how much Olivier loathed his doped-up, often bewildered star by the end of the five-month production. Clark cast a fonder eve on Monroe, even on her off days ("MM looked a bit straggly"), praising her onscreen effect as "magical, and there's no other way to describe it."

At no point did the real Clark cuddle, go skinnydipping or make out with

"MM." but in Mv Week with Marilyn, Colin (Eddie Redmayne) gets to do all that and more. In director Simon Curtis' brisk, highly romanticized adaptation of Clark's diary, Colin ditches a gamine wardrobe girl (Emma Watson) the second the incandescent Monroe (Michelle Williams) requests his presence for a day in the country. Adding complications to their romance are Monroe's grumpy husband Arthur Miller (Dougray Scott), who wants her to stop clinging so he can get some writing done, and the wrathful Olivier (Kenneth Branagh), who just wants her to show up to work, perhaps on time. Despite the departures from

reality, much of Mv Week with Marilyn's dialogue comes almost word for word from Clark's book, ("I look dead in these bloody rushes," groans Olivier, and he's right.) In this lively confection of a film. there's one essential truth: the impossible allure of Monroe. Though less voluptuous than the star, Williams captures Monroe's devouring sensuality with uncanny accuracy. Her performance is to some extent a summary of famous posesthe kiss of Monroe's smile, the conscientious arrangements of breasts and rump-but Williams also locates her elusive mystique and humanity, turning the iconic sex goddess back, briefly, into a

real woman.

More Movies!



CARNAGE

Two boys get into a fight, and their parents (Jodie Foston C. Reilly Kate Winslet and Christoph Waltz) meet to thresho the advilled settlement. Civility is the settlement. Civility is the first casualty, and civilization as we know it the second, in Roman Polanski's film ord rasmine Reza's stage commences. Less on ethical apocalyses than a minero irritation. —R.C. (12/13)

THE GIRL WITH THE DRAGON TATTOO

her nowed and expeller relationship to any we've actually seen David Fincher's hysterically awaited adaptation of the Stieg Larsson megationg starting fire Social Network's Rooney Mara as weind beampoole hackflower seemed beampoole hackflower so weind the seemed beampoole hackflower see

PARIAH

(giteo rescotter Adepen Couples is just string to caption the nightific catering copion the nightific catering copion the nightific catering be copied to the nightific catering catering the nightific catering should perityly and much else besides). Dee Rees' sexual identify and much else besides). Dee Rees' sexual identify and much else besides). Dee Rees' sexual identify the states he quicksiter moods anothers the guidsiter mood anothers the guidsiter mood anothers the guidsiter mood anothers the states are mesmicrogip righ. —JW. (12/26).



THE NANNY-CAM DIARIES

Jonah Hill plays a hapless babysitter in his new movie. How did he fare with a TIME writer's 2-year-old?

BY JOEL STEIN

GETTING A BARYSITTER IS NEVER EASY. So when I saw posters for Jonah Hill's new movie The Sitter—just his derelict mug shot and the tagline "Need a sitter?"—I thought, Why not? I called to ask if hed watch my 2-year-old son Laszlo for a couple of hours on a Sunday while my wife and I got brunch. He's our first babysitter to show up in a Lincoln Town Car with a drive.

We had direver.

We had direvely told Laszlo a lot about Jonah, who's 27 and best known for his foulmouthed cocky need roles in the Judd Apatow movies *Knocked Up*, Fumy People and Superbad. When I showed him a video of Jonah and his *Moneyball* co star Brad Pitt, Laszlo said, unprompted, that he preferred Jonah. He loved it that Jonah co-created and does the voice of the main character in the new animated Fox sitcom Allen Grappy about a spoiled kid whose parents Jose their money. But Laszlo was most impressed that Jonah knew Elmo, from a Sesame Street segment they worked on toeether.

Before we left for brunch, I gave Jonah my cell-phone number, taught him how to jab the EpiPen into Laszlo's thigh if he ate a nut and showed him where we keep the diapers. Only the diapers freaked him out. He tried to persuade Laszlo to hold it for a couple of hours.

As a responsible parent, I put nanny cams all over the house and audiorecorded Jonah's babysitting. Against all expectations and comedic hopes, Jonah is really good with kids: for the first time ever, Laszlo didn't cry when we left the house) Jonah read Truek Duck and The Can in the Hat to Laszlo, sang the alphabet song, taught him how to make fart noises and played with his train set. Whenever Laszlo showed him something, Jonah said, "That's Cool" He put in a lot of effort for someone who, as he told Laszlo, was really hungowed.

Because talking with kids involves a lot of discussion about favorite things, Jonah revealed his favorite movie (Goodfellas), food (sushi), animal (otter), color (green) and number (5). It turns out that a 2-year-old is an amazing interviewer, since he just keeps asking "Why?"

"What do you like to watch on TV?" Ionah asked.

nan asked. "Nothing," Laszlo said.

"That's good. I watch too much TV. I watch Real Housewives of Atlanta." "Why?"

"Because I'm stupid."

Jonah tried to get deep with Laszlo Jonah tried to get deep with Laszlo John drawings over Laszlo's bed, signed by Esme. But Laszlo wouldn't talk. "I'm kind of getting a girlfriend vibe off this Esme," Jonah said, "but you're not, like, being open about it, so I can't really figure out the deal between you two. Feel me? Laszlo, who's Esme? Dish, girlfriend!"

About a half-hour in, Laszlo told Jonah he was hungry, so they looked through the refrigerator. Though Jonah has lost more than 40 lb. by consuming only vegetables, lean protein and beer, he's not the



best nutritionist. "You want salmon?" he asked my son. "That's adult food, I feel like. How about a Popsicle? Am I going to get in trouble for giving you a Popsicle? Who cares? I'm in charge." This was at 10:30 a.m.

They went downstairs, and Jonah started to read *Knuffle Bunny* to Laszlo. "Oh, wait," Jonah said. "The Popsicle—if it melts, I'll get in trouble."

"Why?"

"It will get all dirty. Can we read this upstairs?"

"I'm nervous about the Popsicle. If it melts, your dad is going to get mad at me. Go upstairs with me."



"No."

"I'm going to run and put that Popsicle away. Stay right here."

"No."

"O.K., wait right here, O.K.? Don't move, O.K.? Count to 20, O.K.? I'll be right back. Don't do anything I wouldn't do." When we returned from brunch,

Jonah and Laszlo were sitting on our front steps, looking happy. I paid Jonah with an egg white and veggie omelette from the restaurant, and Jonah talked to Laszlo and me about starring in The Sitter and the upcoming 21 Jump Street (which he executiveproduced and co-wrote), a movie reboot of the Johnny Depp TV series about under-



THE SITTER

tho agrees to one disas night of babysitting

To read more of Joel Stein's interview with Jonah Hill, go to

cover cops at a high school. While he's excited about his more serious work in Moneyball and the indie drama Cyrus, he understands the count in ohe he's found in popular culture, and he's willing to fill it. "I think, If you're an existing fan of mine, what do you want to see me do? Babysitting kids and going back to high school is what you want to see me do, he says.

After finishing the omelette, Jonah said goodbye to Laszlo. "I'm proud of my work today," he said. He should be. The only bad thing that happened: Laszlo now says, "That's cool!" all the time. But that's far better than the words I expected him to pick up.



Move Over, City Slicker

Billy Crystal isn't the only guy in town who can help save the Oscars

THERE ARE FEW OFFORTUNITIES FOR me to really help my fellow human beings. Sure, there's charity work, platelet donations, taking a break from Facebooking in my home office when my 2-year-old son is crying. But those things are unglamorous. Not to get too philosophicial, but if you help prevent a tree from falling in the forest and a ton of people don't hear you helping, did you really help?

But when action-movie director Brett Ratner (Rush Hour, Tower Heist) used the word fags in a Q&A and stepped down from producing next year's Academy Awards ceremony, and Eddie Murphy then quit as host, I knew I was needed. I had famously been one of four writers for the 2009 Oscar ceremony hosted by Hugh but the one who, instead of simply coming up with ideas, did the hard work of calling everyone else's ideas lame.

So when, a day after Murphy stepped down, producer Brian Grazer (Apollo 13, A Beautiful Mind, Frost/Nixon, 2007 TIME 100 Most Influential, Most Powerful Hair in Hollywood) agreed to take over the Oscars, I called him right away with my advice. First thing: Find out everything Ratner was planning, steal all the ideas involving car crashes, and get rid of the rest. But it turns out Ratner hadn't gotten that far. Grazer knew this because the day he was offered the job, he went out to dinner with Ratner, a longtime friend. For those of you wondering what the Hollywood etiquette is when a guy asks if it's cool to take the job his buddy lost two days earlier: yes, Grazer paid.

My next suggestion was to get the Muppets. They sing, dance, tell jokes and, even back in the 1970s, never used the word fags. But Grazer wasn't into it. I suggested getting his new host, Billy Crystal, to open with an Eddie Murphy impression. "I would not do that," Grazer said. "I don't think it's funny." It was as if Grazer were taking over my role in the 2009 Oscar writing room.

I enjoyed the naive enthusiasm that Grazer, who has never been involved in the Oscars other than winning one, exhibited. I remember feeling that too. I won't even say "I told you so" in January when he's begging the Swedish Chef to present and Beaker to give him hair-care advice. But he did make the right decision in immediately getting Crystal to host for his ninth time. My mom, who is demographically precisely the Oscars' audience because she's a mom, was superexcited, since she complains every year when Crystal isn't hosting. "He's not mean-spirited. He just has fun, and you have fun with him," she said. "And my cousin Larry, who is not really my cousin, had a contact with him. He did a eulogy at my uncle Murray's funeral. Aunt Fran said it was fabulous. Or maybe it was



Robin Williams." My mom went on about how Crystal is funny, charming, likable and talented. Then I asked her if she sees every movie he's in. "No," she said. "I didn't even know that Billy Crystal has been in a movie since City Slickers."

We think we want some exciting Oscar host, but when things fall apart, we want Billy Crystal. That's because you don't need an Oscar host who's a hot star. And you don't need someone who will draw in demographics you're not getting, as if you were picking a vice presidential candidate. The Oscars screwed up last year by hiring lames Franco and Anne Hathaway to pander to young people. They screwed up by hiring Chris Rock, Jon Stewart and David Letterman to pander to straight guys. They screwed up by hiring Eddie Murphy to pander to Eddie Murphy.

The Oscars are a celebration of movie glamour. That means the target audi ence is women, old people and gay men. If the Oscars make a high-quality show for women, old people and gay men, we younger straight men, who will be forced to watch, will appreciate it. Producers are usually so desperate to re-create the megaevents of the three-channel broadcast era that they try to craft bits and pieces of their product to suit each cohort. But that's not why everyone saw Roots, bought Thriller and watches the Super Bowl. It's because those things are well made. Forcing something like the Oscars to be something it's not results in inferior quality. It's why my columns are the worst when TIME editors try to get me to write about stuff I don't know about, like the news. Grazer heard the wisdom in all of this

and agreed to stick to soft, warm nostalgia. "I want to celebrate the collective
social experience of the movie theater,"
Grazer told me. "We all have moments
that were much better experienced in
the movie theater. That's going to be the
central driving force," What he's saying
is that all of us—gay, straight, young, old,
male, female—have gotten some action
in a movie theater, Billy Crystal can make
a lack Nicholson loke out of that, easy."

Give The Gift That Will Thrill Everyone!

This holiday season give a gift that brings everyone together... send them world-famous Omaha Steaks°. Aged to perfection, flash-frozen at the peak of flavor and delivered to their door, Omaha Steaks are a gift friends and family can enjoy together.





And FREE Cutting Board to every shipping address



Limit of 2 Packages and 1 Cutlery Set & Cutting Board per ess. Standard shipping & handling will be applied per addres Free gifts must ship with order. Not valid with any other offer. Offer expires 12/31/11

45670KXZ

Ideal Gift Assortment

The Ideal Gift Assortment Includes:

- 2 (5 oz.) Filet Mignons
- 2 (5 oz.) Top Sirloins
- 4 (4 oz.) Boneless Pork Chops 4 (4 oz.) Omaha Steaks Burgers
- 4 Stuffed Baked Potatoes
- 6-inch Chocolate Lover's Cake

Reg. \$152.00 Now only.....



Call 1-800-811-7832 24 Hours a Day, 7 Days a Week.

www.OmahaSteaks.com/KXZ



FILET MIGNONS



TOP SIRLOINS





OMAHA STEAKS BURGERS



STUFFED BAKED POTATOES



CHOCOLATE LOVER'S CAKE



Psychologist and Nobel-winning economist Daniel Kahneman on why people don't make rational choices

In your book Thinking, Fast and Slow, you frame the way we think as two different systems. What are they?

Slow thinking has the feeling of something you do. It's deliberate. It gives you a sense of agency. That's not at all the way it happens when fast thinking operates, like when you brake a car suddenly.

You say we often believe we're thinking slow when we're not. What are the biggest mistakes we make as a result?

We are normally blind about our own blindness. We're generally overconfident in our opinions and our impressions and judgments. We exaggerate how knowable the world is.

What's your favorite experiment that demonstrates our blindness to our own blindness?

It's one someone else did. During [the '90s] when there was terrorist activity in Thailand. people were asked how much they'd pay for a travelinsurance policy that pays \$100,000 in case of death for any reason. Others were asked how much they'd pay for a policy that pays \$100,000 for death in a terrorist act. And people will pay more for the second, even though it's less likely.

What about experts? Shouldn't we trust their instincts?

There are domains in which expertise is not possible. Stock picking is a good example. And in long-term political strategic forecasting, it's been

shown that experts are just not better than a dicethrowing monkey.

Does behavioral economics explain the financial crisis? Overconfident optimism on the part of people who were

speculating or buying houses that they couldn't afford played a role. But fregular economics actually gives a very good explanation: there were people who had incentives to take very large risks for their company, risks that they haven't been punished for.

You endorse a kind of libertarian paternalism that gives people freedom of choice but frames the choice so they are

nudged toward the option that's better for them. Are you worried that experts will mis-

What psychology and behavioral economics have shown is that people don't think very carefully. They're influenced by all sorts of superficial things in their decisionmaking, and they procrastinate and don't read the small print. You've got to create situations so they'll make better decisions for themselves.

Such as?

You'd certainly want to reframe decisions about savings. People should have to opt out [of automatic payroll savings plans] instead of opt in.

Has your research changed the way you live?

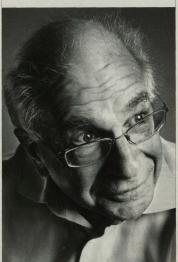
When you analyze happiness, it turns out that the way you spend your time is extremely important. Decisions that affect how much time you spend with people you like are going to have a very large effect on how happy you are-not necessarily satisfied with your life but happy. So yes, I've learned things.

You're a psychologist who won a Nobel in economics. Which Nobel are you going for next? I don't think I'm a candidate for any others.

Physics? I hear that one's easy. Maybe. One could start. -BELINDA LUSCOMBE



VIDEO AT TIME.COM To see interviews other newsmakers. go to time.com/10 questions





Folgers Gourmet Selections® K-Cup® Portion Packs

Extraordinary roasts. Exceptionally rich flavors. For your Keurig® Brewer.

Available where you buy groceries. Find us on Facebook. Facebook.com/folgers Folgers.com



Every journey began in Africa.

Ali and Bono wear Edun; Ali carries the Louis Vuitton/Edun collaborative bag.

Profits from the bag, as well as Ali and Bono's fee benefit Conservation Cotton Initiative Uganda. Follow Ali and Bono on lautsvuitton.com

LOUIS VUITTON